

Profile of the British Columbia High Technology Sector: 2013 Edition

PREPARED FOR THE MINISTRY OF TECHNOLOGY, INNOVATION AND CITIZENS' SERVICES
BY BC STATS – APRIL 2014



BCStats

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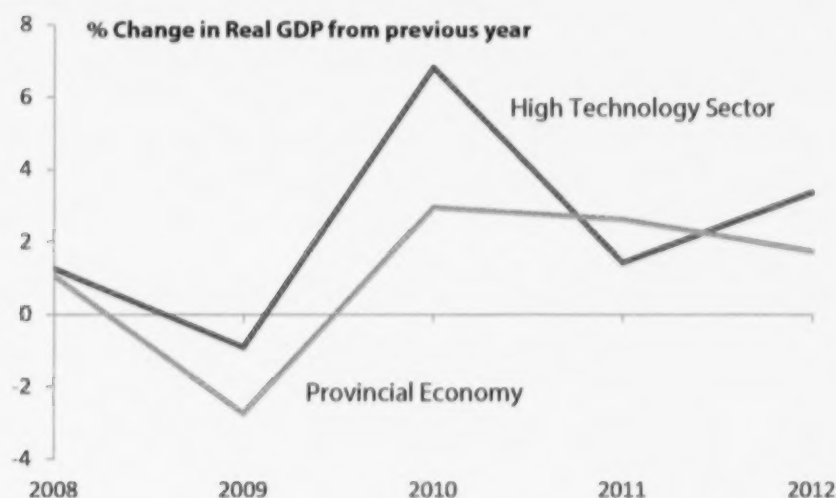
1. Executive Summary

The high technology sector comprises an important part of the economy. High technology firms tend to be innovative and efficient, creating goods and services that confer benefits on other parts of the economy by improving productivity and profitability, while at the same time providing relatively high-wage employment. The tech sector in British Columbia is still relatively small, but the province is home to high tech clusters in areas such as digital media and biotechnology that are among the best in the world.

1.1. B.C.'s high technology sector moved forward in 2012

The gross domestic product (GDP) of British Columbia's high technology sector climbed 3.4% in 2012, the third consecutive year of growth (note that GDP data are constant dollar figures, whereas all other indicators are unadjusted for inflation). Both the manufacturing and service sectors experienced growth in GDP. High tech manufacturing GDP rose 3.7%, while the high tech service sector saw a 3.3% increase in GDP.

B.C.'S HIGH TECH SECTOR TENDS TO PERFORM BETTER THAN THE OVERALL PROVINCIAL ECONOMY



With the exception of 2011, B.C.'s high tech sector has outperformed the overall economy over the last five years

In general, B.C.'s high technology sector tends to outperform the general economy and 2012 was no exception, as the 3.4% growth in high tech GDP was double the rate of

growth of the industrial aggregate GDP for the province (1.7%). High technology accounted for approximately 7.6% of British Columbia's overall economic output in 2012.

Revenues in British Columbia's high technology sector also grew in 2012, climbing 3.5%, to \$23.2 billion. The increase was driven mainly by the service sector, which saw revenues surge 3.9%. However, high technology manufacturing revenues also increased, edging up 0.9%.

1.2. High tech employment fell, but wages continued to rise

In contrast with GDP and revenue, employment in British Columbia's high technology sector experienced a slight decline in 2012, dipping 0.2% to 84,070. A 1.2% drop in employment in the service sector drove the overall drop as high tech manufacturing industries increased employment by 5.6%. Overall, the high technology sector employed approximately 4.3% of British Columbia's work force in 2012. Despite the recent reductions in employment, B.C.'s high technology sector continues to employ more people than the mining, oil and gas, and forestry sectors combined.

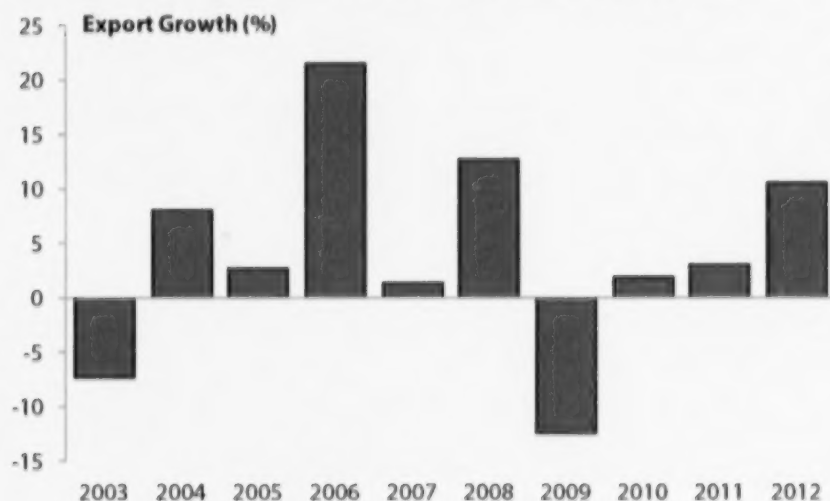
Despite the drop in high tech employment, aggregate wages and salaries in British Columbia's high tech sector continued to rise, climbing 7.7% in 2012, to almost \$6.3 billion, the highest level ever recorded. At \$1,440, average weekly earnings in the high tech sector are far higher than the overall B.C. average weekly wage rate of \$870.

The B.C. high technology sector added 253 net new businesses in 2012, a growth of 2.9% over the previous year. In total, there were 9,010 high tech businesses with employees in the province in 2012. About 92% of these businesses were in service sector industries. There were another 31,036 businesses in the high technology sector with no employee payroll (which can be seen as a proxy for the number of self-employed people with no paid help), bringing the total number of high tech businesses in B.C. in 2012 to 40,046.

1.3. Exports and imports of high tech goods grew in 2012

International trade is an important aspect of the high technology sector, as reflected in the high volume of two-way trade. The domestic market for high technology goods does not have sufficient magnitude to achieve the economies of scale needed to remain competitive and, in some cases, B.C. manufacturers do not produce enough of some types of goods to satisfy domestic demand. As such, both exports and imports play an important role in B.C.'s high tech sector.

B.C. HIGH TECHNOLOGY EXPORTS EXPERIENCED STRONG GROWTH IN 2012



In 2012, B.C.'s high tech exports recorded their largest increase since the global economic downturn

In 2012, the value of British Columbia high technology goods exports jumped 10.5%, to \$994.3 million, the largest increase since the global economic downturn. This was in sharp contrast to B.C.'s overall goods exports, which fell 4.2%. As a result, the proportion of overall exports comprised of high technology goods climbed to 3.2%. Despite the growth, the value of high tech commodity exports has yet to recover to the peak value recorded in 2008, before the downturn reduced demand for many goods, including high tech products.

High technology product export growth was mixed depending on the destination, with strong growth of 13.3% in shipments to the United States and 20.6% in exports of high tech goods to Pacific Rim countries, but a 1.6% decline in shipments to the European Union. A 125.9% jump in exports of high tech products to Japan was the main driver of the increase in exports to the Pacific Rim.

The value of high technology imports into B.C. edged up 0.9% in 2012, with a mixed performance depending on the origin of the goods. Shipments from Mainland China climbed 6.2% in 2012, while imports from the United States rose 7.1%. Despite the strong growth in imports from Mainland China, high technology commodity imports from the Pacific Rim as a whole stalled in 2012, inching up only 0.1%, which was the same rate of growth for B.C.'s high tech imports from the European Union. Substantial declines in shipments from South Korea (-38.0%) and Taiwan (-25.7%) tempered overall growth in imports from the Pacific Rim. Similarly, a 44.4% drop in shipments from the Netherlands, combined with slower imports from the United Kingdom (-14.5%) and France (-11.0%), affected the growth in imports from the European Union.

British Columbia imports substantially more high technology goods than it exports and, as a result, the province runs a trade deficit in these commodities. In 2012, this trade gap narrowed slightly as exports grew faster than imports. Nevertheless, the deficit was still \$3.9 billion, or nearly four times the total value of B.C.'s high tech exports.

Computers and telecommunications products dominate both exports from and imports to British Columbia, with aerospace goods and life sciences products (which are mainly comprised of medical equipment) the next two most important commodity groups.

Trade in goods is an important component of B.C.'s high tech sector, but trade in services plays an even larger role. In 2012, the value of high tech service exports was more than double that of international shipments of high tech goods. In contrast to the strong growth in exports of high technology goods, high tech service exports fell 3.2% in 2012.

1.4. B.C. still has a relatively small high tech sector compared to other jurisdictions

British Columbia's high technology sector ranked fourth among the provinces in employment, international exports, revenue and business counts, but had the third largest employment count and ranked tied for second in average weekly earnings. The province has a much smaller high tech sector than the majority of U.S. states as well, with high technology making up a far smaller share of employment and GDP than the majority of states.

2. Introduction

2.1. The study of high technology

Technology influences many facets of our lives, from how we do our work, to how we communicate with each other, to how we spend our leisure time. Given the ubiquity of technology in today's society, the tech sector offers substantial opportunities for economic growth; therefore, it is important to track activity in the high technology sector to ensure that these opportunities are not squandered. With this in mind, the *Profile of the High Technology Sector* is part of an ongoing effort to monitor the growth and performance of the high technology sector in British Columbia by evaluating the economic contribution of firms that produce high technology goods and services. The key indicators examined include gross domestic product, revenue, employment, wages and salaries, business counts and international trade.

The characterization of a high technology sector within traditionally-defined industrial sectors of the economy is based on the premise that high technology firms behave in a manner that allows them to be understood as a group and that programs or policies can be tailored to respond to their needs.

2.2. Defining high technology

In general terms, high tech is defined as technology that is at the cutting edge and is usually associated with strong economic growth and advanced technological development. Since research and development (R&D) is a key factor in technological advancement, those industries that perform a significant amount of R&D often have a considerable high tech component. However, an industry does not necessarily need to be R&D intensive to be considered high tech. Industries that produce goods or services that are uniformly recognized as high tech outputs are also included in the high technology sector. The concept of the high technology sector used in this report is basically product-based; therefore, some manufacturers that employ advanced processes are not included. In other words, just because a good is produced using advanced processes does not automatically make it a high tech product. For example, a tomato produced in a high tech greenhouse is still just a tomato.

There are many different definitions of high technology in use around the world. This report uses two different definitions—one that is industry-based and another that is

commodity-based—to measure, respectively, high tech's contribution to the British Columbia economy and the volume of international trade in high technology goods.

Since the inception of the *Profile* reports in 1996, statistics on the high technology sector have been constructed using information from standard industries defined under the North American Industry Classification System (NAICS).¹ This industry-based approach offers consistency with other Statistics Canada data, as well as comparative data for other provinces and the United States, with a reasonable degree of accuracy.

It should be noted that the high technology definition used by BC Stats is a British Columbia-focused classification. Some high technology industries that are not present in British Columbia, but may be prevalent elsewhere, may be excluded from the data presented in this report. Conversely, some industries that have a substantial high tech component in British Columbia and are therefore included in the high technology sector may be mainly low tech in other regions. For example, the fuel cell industry is included in the NAICS classification 335990 (all other electrical equipment and component manufacturing), which is generally not considered a high technology industry. However, given the presence of the fuel cell cluster in B.C., it makes sense to include it in B.C.'s high tech sector definition.

The industry-based definition includes manufacturers of pharmaceuticals and other chemicals, computers and other electronic products, aerospace products and parts, and medical equipment and supplies. Also included are service industries such as engineering, computer services, motion picture and video production, surveying and mapping, scientific and technical consulting, telecommunications, and research and development.

For a more detailed discussion of the industry-based definition used in this report, including a complete listing of the industries included in BC Stats' high technology definition, see Appendix A, "Defining the High Technology Sector." Note that, due to confidentiality requirements, the industry detail available for reporting purposes is limited. For most of the data tables in this report, the manufacturing industries are not reported separately and service industries are grouped into the following categories: motion picture production and post-production; telecommunications; engineering services; software publishing; other computer and related services; and other services.

¹ NAICS is a system of classifying industries developed in cooperation between Statistics Canada, the United States Office of Management and Budget and the Instituto Nacional de Estadística, Geografía e Informática of Mexico.

While an industry-based definition makes sense when examining high technology GDP or employment, it is not really appropriate for looking at trends in high tech commodity exports and imports. For this purpose, a second, commodity-based definition was developed. This definition was constructed using harmonized system codes, which are the commodity classification codes used in Canadian customs documents. The list of commodities classified as high technology products was based on the U.S. Bureau of the Census' advanced technology products (ATP) list, which is a recognized definition of high technology goods. Since Canadian and American commodity codes are identical only at the six-digit level and Canadian export codes are eight digits and import codes are ten digits, it was necessary to do some conversion. As a result, the final definition may not be identical to that used in the United States; however, it is reasonably similar and allows for broad comparisons.

For more detail on the commodity-based definition used in this report and a brief description of the ATP categories, see Appendix B, "Defining High Technology Commodities."

2.3. New to this year's edition

This report includes the latest information available as of November 2013. It should be noted that data revisions may result in differences between this and earlier editions of this publication. There have been significant changes to the provincial economic accounts, which are the source for gross domestic product (GDP) figures and are also used in the production of revenue and employment numbers. These changes have resulted in larger than normal revisions to the high technology estimates. In addition, the base year for constant dollar figures has been updated from 2002 to 2007. Also, the methodology used to calculate high technology exports of services has been improved, such that the figures reported in Table 48 are significantly different from those reported in earlier editions of this report.

Readers should note that graphs and text in this publication deal only with the highlights of the information that has been collected. The data tables preceding the appendices contain additional useful detail.

With this edition, new tabular data have been added to the report with three new tables offering information on the United States' high technology trade in goods by trading partner.

2.4. Input Indicators of the British Columbia High Technology Sector

This *Profile* report provides an overview of the outputs of the high technology sector in British Columbia; however, it is also useful to look at the inputs to the high technology sector. To this end, BC Stats produces a companion report: *Input Indicators of the British Columbia High Technology Sector*. The *Indicators* report provides measures of the inputs to the high technology sector and the overall climate of innovation in British Columbia. It covers a variety of activities with respect to high technology in the educational, business, government, external and labour sectors. Whenever possible, the indicators are presented in comparison to other provinces, which serve as benchmarks for the situation in British Columbia.

3. Profile and Trends

3.1. B.C.'s high technology sector saw growth in 2012

B.C.'s high tech sector performed fairly well in 2012, with growth in most indicators. The only exception was employment, which saw a small decline. However, high tech gross domestic product (GDP), exports and earnings all experienced growth in excess of the provincial aggregate of all industries and goods.

3.2. Gross Domestic Product

3.2.1. High tech sector GDP increased in 2012

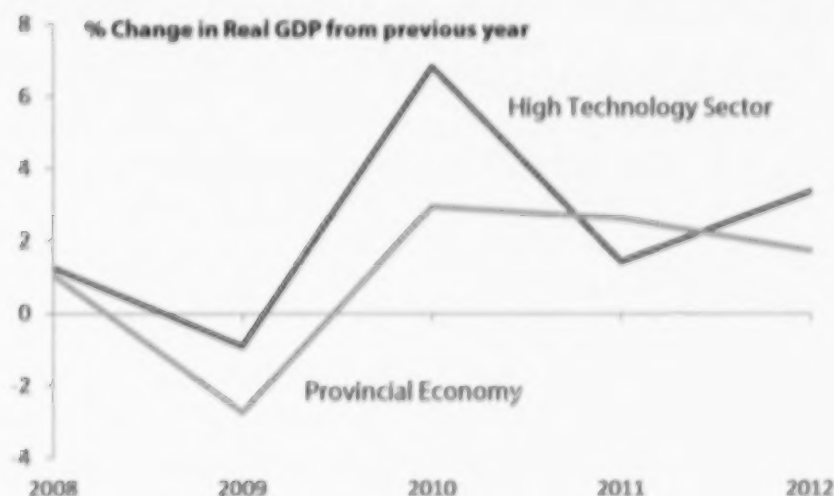
The GDP of British Columbia's high technology sector climbed 3.4% in 2012, the third consecutive year of growth.² Both the manufacturing and service sectors experienced growth in GDP with high tech manufacturing GDP rising 3.7%, while the high tech service sector saw a 3.3% increase in GDP.

Among the service sector industries, engineering performed the best, with GDP jumping 11.7%. The computer and related services sector bucked the overall trend, with GDP slipping 0.1%.

² All GDP figures quoted in this paper are in chained 2007 constant dollars unless otherwise stated.

In general, B.C.'s high technology sector tends to outperform the general economy and 2012 was no exception, as the 3.4% growth in high tech GDP was double the rate of growth of the industrial aggregate GDP for the province (1.7%). Over the last five years, GDP growth in the high tech sector has been stronger than that of the economy as a whole in every year except 2011.

FIGURE 1: REAL GDP GROWTH FOR HIGH TECHNOLOGY AND OVERALL ECONOMY, BRITISH COLUMBIA



With the exception of 2011, B.C.'s high tech sector has outperformed the overall economy over the last five years

Although the high tech sector in B.C. is still relatively small, it plays a significant role in B.C.'s economy. In 2012, high tech generated approximately 7.6% of the province's GDP, putting it in the same ballpark as industries such as construction, and health care and social assistance.³ In comparison, B.C.'s forest sector (wood, pulp and paper production, logging and silviculture) produced around 3% of total GDP. The real estate and rental and leasing sector (including owner-occupied dwellings) generates the greatest contribution, at just over 17% of GDP.

3.2.2. Services constitute the bulk of high tech GDP in B.C.

In 2012, B.C.'s high tech service sector industries generated almost \$12.6 billion in output, or about 89% of the province's high tech GDP. This compares to only \$1.7 billion derived from B.C.'s high tech manufacturing industries.

³ This percentage is calculated using current dollar GDP estimates, since the constant dollar value of the B.C. industrial aggregate is chained and chained data are not additive; therefore, the percentage cannot be properly calculated.

B.C. GDP, 2012 (CHAINED 2007 DOLLARS)

	\$million	% change 2011/2012
Manufacturing	1,666	3.7
Services	12,555	3.3
High Tech Total	14,040	3.4
B.C. Total	191,749	1.7

While it is useful to examine the high technology industry's performance relative to other industries in British Columbia and to look at trends comparing the industry's performance today to what it was a year ago or a decade earlier, one cannot really judge the size and scope of B.C.'s high tech sector without comparing it to high tech sectors in other jurisdictions.

In Canada, there are five provinces that, based on economic measures, have significant high technology sectors: Ontario, Quebec, British Columbia, Alberta and Manitoba. For most of the high technology indicators measured in this report, British Columbia ranks either third or fourth among these provinces.

3.2.3. B.C. ranks third in the country in high technology GDP

The bulk of Canada's high technology sector resides in central Canada. Ontario's high tech sector generated \$44.2 billion in GDP in 2012, accounting for 39% of the Canadian total. Quebec ranked second with \$24.7 billion in high tech GDP, followed by B.C. with \$14.0 billion. Alberta's high tech GDP was also \$14.0 billion, but it was about \$4 million shy of B.C.'s total. The output from B.C.'s high tech sector comprised around 12% of total Canadian high tech GDP in 2012.

In 2012, roughly four-fifths of the Canadian high tech sector's GDP was generated by the service sector. Among the high tech provinces, Manitoba and Quebec had the lowest shares of high tech GDP generated by the service sector, at 66% and 68% respectively. The large aerospace industry and significant production of pharmaceuticals are the main reasons that manufacturing makes up a larger portion of the high tech sector in Quebec than in the rest of the country, and the aerospace industry has a substantial presence in Manitoba as well. Alberta's service sector was responsible for 94% of the province's high tech GDP, the highest ratio among the high tech provinces. In Ontario, the service sector accounted for 78% of the high tech output, compared to 89% in British Columbia.

Growth rates for high tech sector GDP varied across the country in 2012. Nationally, high tech GDP inched up only 0.1%, with a 7.5% slump in high tech manufacturing

offsetting a 2.8% boost in services. Both Ontario and Quebec contributed to the slump in high tech manufacturing GDP and, in both cases, the decline in the manufacturing sector was enough to push overall GDP growth into negative territory. Quebec's high tech GDP fell 4.1% in 2012, while Ontario's edged down 0.5%. Alberta experienced the strongest growth in high tech GDP, with a jump of 5.2%. A 9.1% rise in manufacturing GDP helped propel Manitoba's overall high tech GDP 3.5% higher, slightly better than B.C.'s 3.4% increase.

3.2.4. High technology plays a far bigger role in the United States

High technology comprises a much larger portion of the United States' economy compared to the high tech sector in Canada. Almost 11% of the United States' GDP was generated by the high tech sector in 2012, or nearly \$1.7 trillion.⁴ By comparison, high tech comprised just over 8% of Canada's GDP and Canadian high tech output was around 8% of the U.S. total.

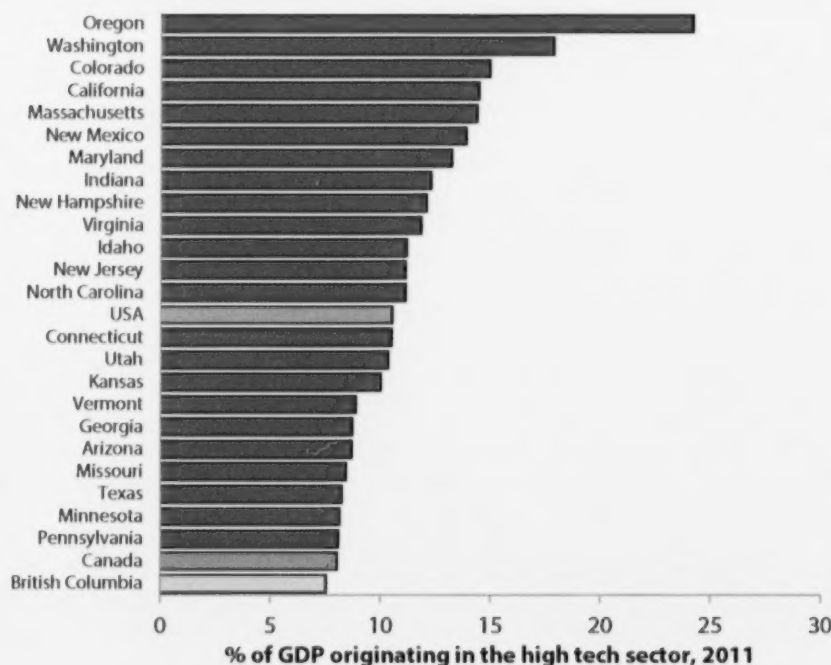
In 2011,⁵ the states where the high technology sector contributed the most to GDP were Oregon, Washington and Colorado. Oregon was far and away the most dependent on the high tech sector, with 24% of the state's GDP produced by high technology industries. This may come as a surprise to many who see Oregon as largely a producer of lumber, but the state is home to a significant high technology hub that has garnered the nickname of the "Silicon Forest." Oregon's high tech sector is concentrated primarily in manufacturing of high tech goods and is the location of the factories of high tech giants such as Intel and Hewlett-Packard.

The high tech sector is responsible for around 18% of Washington State's GDP. Washington has substantial software and aerospace sectors, led by industry leaders Microsoft and Boeing, respectively. Almost 15% of Colorado's GDP was derived from high tech industries in 2011. The state is home to a large telecommunications hub and has significant computer services and computer manufacturing industries.

⁴ All dollar figures for the United States have been restated in Canadian currency to allow direct comparison with Canadian figures. An annual average of the Canada/U.S. exchange rate was used to perform this conversion. All GDP figures for the U.S. are in current dollars and comparisons with Canada and the provinces are made using current dollar figures.

⁵ The data necessary to calculate high technology GDP by state are not yet available for 2012.

FIGURE 2: HIGH TECHNOLOGY GDP BY STATE, 2011



High technology industries play a significant role in the economies of many U.S. states

California has by far the largest high tech sector in the United States in terms of total value of output, generating \$275.7 billion in GDP in 2011. California alone accounted for almost 18% of the nation's total high tech GDP. The high tech sector produced just over 14% of the state's GDP, driven by the computer industry in the Silicon Valley, the well-established motion picture industry and a significant telecommunications presence. The value of GDP produced by California's high tech sector alone was more than double that of all high tech output in Canada as a whole.

Overall, high technology plays a far more significant role in the economies of most American states than it does in Canadian provinces. In 2011, there were 26 states where high tech contributed more as a proportion of GDP than in British Columbia. Even in Quebec, where high tech generated 10.3% of GDP in 2011, the province ranked below 16 states. In absolute terms, based on the value of output generated by the sector, almost half the states had larger high tech sectors than British Columbia in 2011.

3.3. Revenue

3.3.1. High technology revenue increased in 2012

Revenues in British Columbia's high technology sector climbed 3.5% in 2012, to \$23.2 billion.⁶ This was the third consecutive year of growth after slumping during the global economic downturn. After tepid growth of 0.4% in 2010, revenues rebounded in 2011 with a substantial increase of 17.1%. The 3.5% rise in 2012 was driven mainly by the service sector, which saw revenues surge 3.9%. However, high technology manufacturing revenues also increased, edging up 0.9%.

Within the service sector, only telecommunications saw a decline in revenue, with a drop of 3.9% in 2012. Engineering services experienced by far the most robust growth, with revenues climbing 13.5%.

3.3.2. Revenue growth in B.C.'s high tech sector comparable to Canadian average in 2012

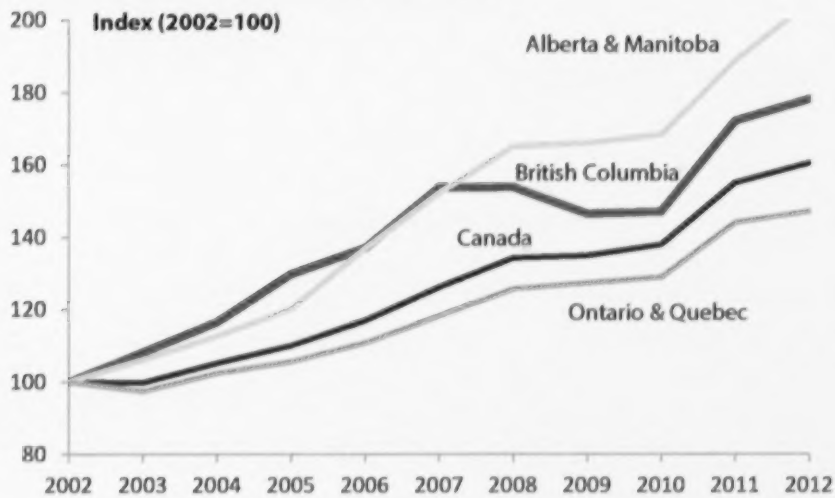
B.C.'s 3.5% increase in high tech revenues was slightly below the Canadian average of 3.6% growth. Alberta saw the strongest year-over-year growth, at 9.1%, followed by Manitoba with a 5.3% jump in revenues. Growth in high tech revenues in Quebec and Ontario trailed B.C., with a 2.7% boost in revenues in Quebec and a 1.8% rise in revenues in Ontario. The 3.6% rise in Canadian high technology revenues was well below the 5.8% increase in revenues in the United States.

3.3.3. Over the last decade, B.C. has had some of the strongest revenue growth

British Columbia has been among the top provincial performers in terms of growth in high technology revenues over the last decade. Since 2002, high tech revenues in B.C. have significantly outpaced overall Canadian high tech revenue growth. Alberta and Manitoba experienced the strongest growth in high tech revenues across the high tech provinces, while the more manufacturing-intensive central Canadian provinces of Ontario and Quebec trailed the national average in revenue growth over the last decade.

⁶ Note that all revenue, wage and trade figures in this report are in current dollars as sufficient information is not available to calculate constant dollar figures. As such, growth rates include the effects of inflation.

FIGURE 3: INDEX OF HIGH TECH REVENUE GROWTH



Growth in B.C.'s high tech revenues has outpaced the Canadian average over the last decade

3.4. Employment

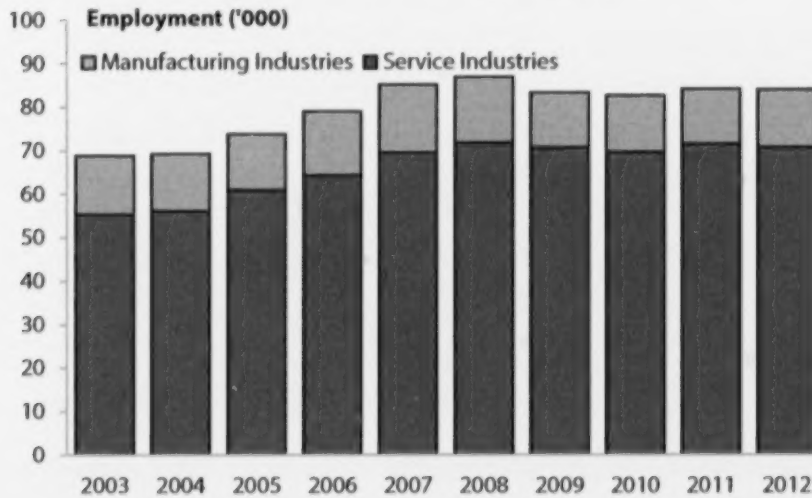
3.4.1. B.C. high tech sector employment dropped in 2012

In contrast with GDP and revenue, employment in British Columbia's high technology sector experienced a slight decline.⁷ High tech employment in the province edged down 0.2% in 2012, to 84,070. Since its employment peak in 2008, B.C.'s high tech sector has shed around 2,880 jobs. In 2012, it was the service sector driving the overall decline. Between 2011 and 2012, B.C.'s high technology service sector employment dropped 1.2%. By comparison, employment in high tech manufacturing industries jumped 5.6% to 13,330 jobs, the highest level seen since the global economic downturn resulted in a 17.3% drop in high tech manufacturing employment in 2009. In B.C., the high tech sector has trailed the industrial aggregate in terms of employment growth for four of the last five years.

⁷ The measure of employment used in this report is based on Statistics Canada's Survey of Employment, Payroll and Hours (SEPH). This employer survey provides a wealth of detail about employment, wages and hours in a large number of industries. However, because it is an employer survey, the SEPH data do not include self-employed workers and workers in commercial fishing, agriculture and some services.

The data from SEPH give an average number of workers in an industry through the course of the year. If an industry is highly seasonal, the peak number of workers is offset by those months where there are fewer workers. A full-time worker is accorded equal status with a part-time worker. No attempt is made to measure the number of "person years" or "full-time equivalents."

FIGURE 4: BRITISH COLUMBIA HIGH TECHNOLOGY EMPLOYMENT



High tech employment fell in 2012 and has underperformed the industrial aggregate for four of the last five years

Most of B.C.'s high tech job loss in 2012 occurred in the film sector. The motion picture production and post-production industry suffered substantial job losses, with a 31.5% decline in employment. This comes on the heels of an 11.0% drop a year earlier. In just the last two years, this industry has reduced its employment by almost 3,000 jobs. On the other hand, there was an 8.4% jump in engineering employment, which follows on the heels of an 11.7% boost a year earlier, such that the number of jobs in engineering services eclipsed the high watermark set in 2008. Also, the number of software publishing jobs in the province climbed 6.1%, recovering all the ground lost a year earlier. The other services sector saw more modest employment growth of 3.5%, while telecommunications jobs dipped 0.3%.

3.4.2. Most of B.C.'s tech workers are employed in the service sector

Around 84% of workers in the high technology sector in British Columbia were employed in a service industry in 2012, up from 79% ten years earlier. Two high tech service industry groups—other computer and related services (excluding software publishing), and engineering services—employed more people than all high tech manufacturing industries combined. There were 13,330 high tech manufacturing employees in B.C. in 2012, compared to 20,660 workers in other computer and related services' jobs and 15,640 in engineering services.

B.C. EMPLOYMENT, 2012

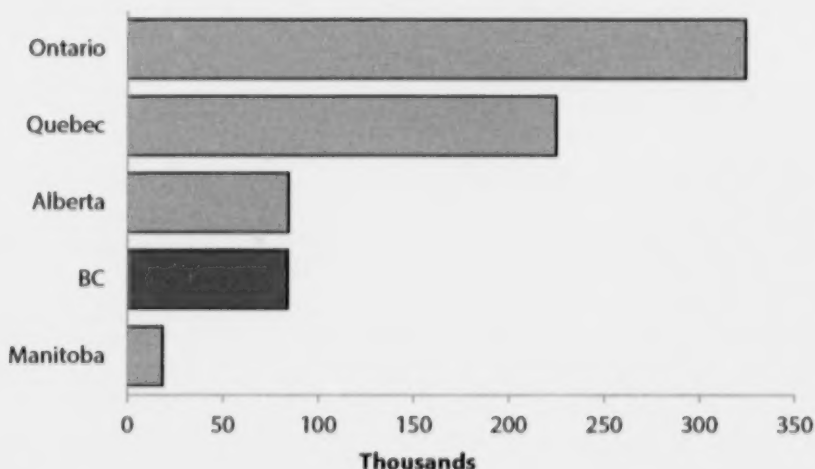
	Workers	% change 2011/2012
Manufacturing	13,330	5.6
Services	70,740	-1.2
High Tech Total	84,070	-0.2
B.C. Total	1,947,670	1.2

Despite the recent reductions in employment, B.C.'s high technology sector continues to employ more people than the mining, oil and gas, and forestry sectors combined. In 2012, there were around 43,000 people working in B.C.'s forest sector (which includes logging, silviculture, and wood and paper manufacturing industries) and 22,100 employed in the mining, oil and gas sector, for a total of 65,100, compared to 84,070 people employed in the high tech sector.

3.4.3. B.C. has the fourth largest high tech workforce in Canada

British Columbia's high technology employment ranks fourth in the country. Ontario leads the way with 324,090 employed in the high tech sector, or 41% of all Canadian high tech workers. Quebec is home to 29% of the country's high tech employees, more than Alberta (11%), B.C. (11%) and Manitoba (2%) combined.

FIGURE 5: HIGH TECHNOLOGY EMPLOYMENT BY PROVINCE, 2012



B.C. ranked fourth in high tech employment in Canada in 2012

In 2012, among the high tech provinces, Alberta saw the highest rate of growth in high technology employment, at 7.7%. Ontario was the only other province to exceed the Canadian average rate of 2.7%, with 3.5% growth in employment in that province.

Quebec also saw an increase in employment, at 1.9%, while Manitoba's high tech employment declined at the same rate as B.C.'s, edging down 0.2%.

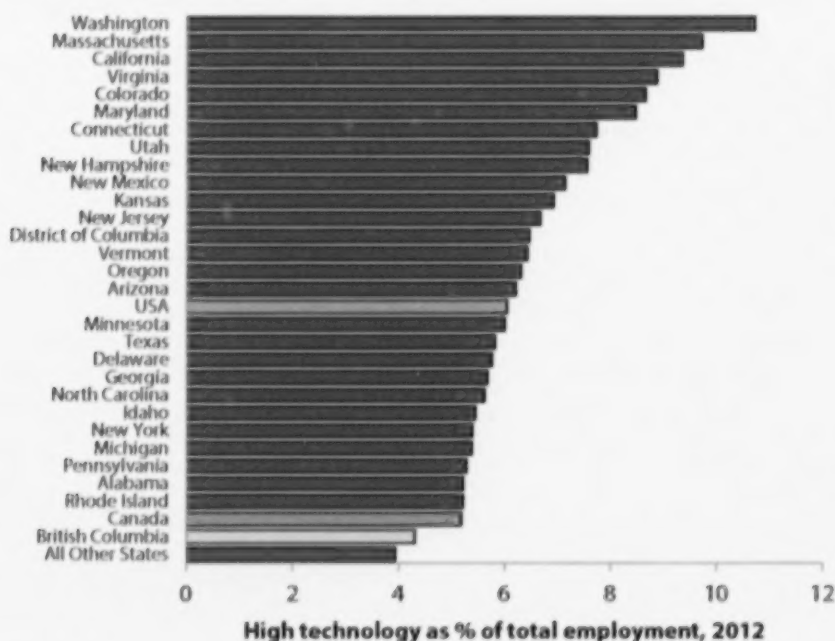
Overall, the high technology sector employed approximately 4.3% of British Columbia's work force in 2012, placing B.C. fourth among the high tech provinces. Quebec, at 6.5%, has the largest share of its workforce in the high tech sector, followed by Ontario (5.6%) and Alberta (4.4%). Manitoba (3.2%) trails B.C. in terms of high tech's share of overall provincial employment. The high tech sector employs approximately 5.2% of all workers in Canada.

3.4.4. A greater percentage of Americans are employed in high tech industries

Relative to Canada, the United States has a greater proportion of its workforce employed by high technology industries. In 2012, 6.1% of American employees worked in high technology industries.⁸ Among the states, high technology's share of total employment ranged from a high of 10.7% in Washington State to a low of 2.5% in Wyoming. Other states where the high technology sector is a prominent employer include Massachusetts (9.7%), California (9.4%), Virginia (8.9%), Colorado (8.7%) and Maryland (8.5%).

⁸ Similar to the Canadian numbers, the employment data used in this report comes from an employer survey (*Quarterly Census of Employment and Wages*), so self-employed workers are excluded.

FIGURE 6: HIGH TECHNOLOGY AS A PERCENT OF TOTAL EMPLOYMENT, 2012



Washington State has the largest share of employment comprised of high technology workers

A total of 34 states ranked ahead of British Columbia in terms of the sector's importance as an employer.⁹ Even Quebec, where 6.5% of employment was generated by the high technology sector, the highest rate in Canada, ranked slightly behind New Jersey, which placed 12th in the United States.

In 2012, there were slightly fewer than eight million people employed in the high tech sector in the United States, up 1.9% from a year earlier. Just shy of 18%, or 1.4 million of these high tech employees resided in California. In that state, more than a third (36%) of high tech workers were employed in companies that manufactured computers or provided computer systems design services. Engineering companies and the motion picture industry were also major high tech employers in California. High tech employment in California was more than double that of second-ranked Texas, which had just over 0.6 million employees in the sector.

Manufacturing jobs make up a slightly larger share of high technology sector employment in the United States relative to Canada. In 2012, about 30% of all high tech jobs in the United States were in manufacturing industries, compared to 24% for Canada and just 16% in British Columbia. Given that businesses in manufacturing

⁹ For ease of reporting, the District of Columbia is counted as a state.

industries tend to have more staff on the payroll than those in the service sector, this could explain why high tech workers comprise a larger share of the total employed workforce in the U.S. than in Canada.

In 2012, there were four states where manufacturing industries employed at least half of the state's high tech workforce, topped by Vermont at 53%. At the other end of the scale, high technology employment in the District of Columbia, Alaska and Hawaii was almost all in the service sector, with 3% or less of high tech workers in those states employed in manufacturing industries.

3.5. Wages and Salaries

3.5.1. High tech wages and salaries hit all-time high in 2012

Despite fewer employees collecting paycheques, aggregate wages and salaries in British Columbia's high tech sector continued to climb in 2012.¹⁰ Total high technology wages and salaries rose 7.6%, to almost \$6.3 billion, the highest level ever recorded. This was almost double the 4.1% growth in total wages and salaries across all industries in British Columbia. Both the manufacturing and service sectors experienced the same 7.6% growth in wages and salaries. The only high tech industry to see a drop in overall earnings was the motion picture production and post-production industry (-21.1%). This was due to the substantial drop in employment in the industry.

The jump in total high tech wages and salaries in B.C., despite a drop in employment levels, was possible due to a 7.7% increase in the average weekly earnings of high tech workers in the province. Both the high tech manufacturing and service sectors experienced wage inflation in 2012, although the pay hikes in the service sector were more substantial. Workers in high tech service industries saw their average weekly earnings climb 8.8% in 2012, while manufacturing employees earned 1.8% more than they did a year earlier. Growth in earnings of high tech workers was far stronger than the general pay increase across B.C., which climbed only 2.9%.

The highest growth in average weekly earnings was in the motion picture production and post-production industry, with growth of 15.2%. This is probably related to the

¹⁰ Wages and salaries are based on the earnings of all workers in an industry who are on the payroll, from working owners and senior executives to junior support staff. While overtime and bonus pay are included, other benefits such as medical plans, stock options and time off in lieu of overtime are not. Like the employment values described earlier in this report, the wages and salaries data are calculated using source data from Statistics Canada's Survey of Employment, Payroll and Hours.

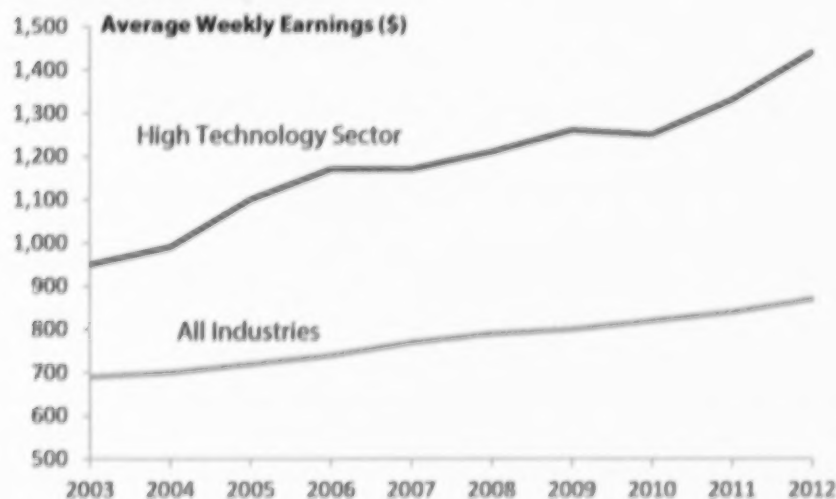
reduction in employment in that industry and the likelihood that the first employees laid off were those with less experience and, therefore, lower pay grades. There was also double-digit growth in average earnings for those working in other computer and related services (10.1%) industries. Average earnings in the software publishing industry bucked the trend, falling 0.8%. This could be the opposite situation of the experience in the film sector, as there was strong growth in employment in the software industry, which could mean that an influx of inexperienced workers helped drive down the average wage rate.

3.5.2. Workers in B.C.'s high tech sector earn significantly more than the provincial average

On average, workers in B.C.'s high technology sector earn far more than the average employee in the province. In 2012, average weekly earnings of high tech employees were \$1,440 per week, compared to just \$870 for the average B.C. worker. The biggest discrepancy is in the service sector, where the average weekly earnings were \$1,510 in the high tech sector compared to only \$820 for the average worker in the service sector as a whole. The difference in pay was far smaller in the manufacturing sector, where high tech workers earned \$1,030 per week, on average, while for the manufacturing sector overall, wages were actually higher, averaging \$1,100 per week.

The disparity in wages for high tech workers and those in other industries is likely due to a combination of greater skill requirements relative to many jobs, as well as a strong demand for skilled high technology workers, therefore requiring greater pay to both attract and retain them.

FIGURE 7: AVERAGE EARNINGS IN THE HIGH TECHNOLOGY SECTOR COMPARED WITH ALL INDUSTRIES, BRITISH COLUMBIA



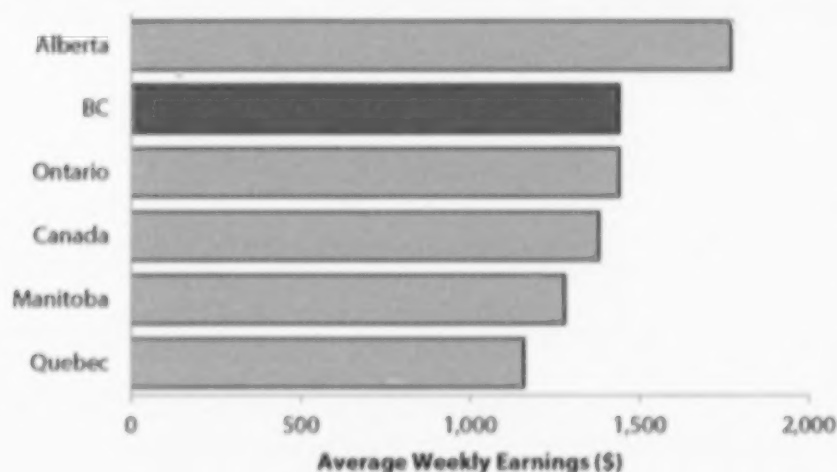
Wages in high technology industries are far higher than the average for all industries in the province

The highest paid workers in the high tech sector were in the engineering services industry, with average weekly earnings of \$1,990, well above the \$1,440 average weekly pay for the sector as a whole. At only \$580 per week, on average, the motion picture production and post-production industry had by far the lowest pay among high technology industries.

3.5.3. Earnings of high tech workers in B.C. higher than the national average

In 2012, high tech employers in B.C. ranked second among the high tech provinces with respect to the amount of compensation offered to employees, tied with Ontario. British Columbia and Ontario's average weekly earnings of \$1,440 for a high tech worker were better than the Canadian average of \$1,380 and trailed only Alberta, where high tech companies offered the highest average wage, at \$1,770 per week. The pay was particularly lucrative for Alberta's engineers and for employees of the computer systems design and related services industries. High tech workers in Manitoba (\$1,280) and Quebec (\$1,160) earned well below the Canadian average.

FIGURE 8: AVERAGE EARNINGS IN THE HIGH TECH SECTOR BY PROVINCE, 2012



B.C. high technology average earnings were higher than the national average in 2012

With the exception of Ontario, where wages remained unchanged, all the other high tech provinces experienced wage inflation in the high technology sector in 2012. British Columbia had by far the highest wage growth, as average weekly earnings in B.C. jumped 7.7%. For Canada as a whole, earnings of high tech workers climbed 2.2%. The only province other than B.C. to see wage growth higher than the Canadian average was Alberta, with 2.8% growth in weekly pay. Manitoba's high tech earnings grew at the same rate as the national average (2.2%), while high tech employees in Quebec saw a smaller wage boost of 1.4%.

Wages in Canada are relatively low compared to pay in the high tech sector in the United States. In 2012, the average weekly wage for high tech workers in the United States was \$1,788, ranging from \$1,089 in South Dakota to \$2,321 in California. There were 26 states where high tech employers paid more, on average, than British Columbia's high tech workers received. Given this disparity, one can see why high tech companies in British Columbia may have trouble recruiting skilled employees during periods when the labour market is tight. A large part of the problem is that most of the high tech companies in B.C. are small and likely cannot afford to pay as much as larger businesses in the United States.

3.6. Business Counts

3.6.1. Number of high tech businesses in B.C. rises in 2012

Following the global economic downturn that occurred late in 2008 and dragged through most of 2009, there was a significant contraction in the number of high technology businesses in British Columbia in the two succeeding years. From 2009 to 2011, the high tech business count dropped by 146. However, 2012 saw resurgence in the sector with a net addition of 253 businesses, translating to 2.9% growth from 2011.

In total, there were 9,010 high tech businesses with employees in the province in 2012.¹¹ The growth in businesses in the high tech sector was more robust than that of the economy overall, which saw an increase of 1.4% in the number of business locations.

The strongest growth was in medium-sized businesses with 50 to 499 employees. There was a net increase of 95 high tech businesses of this size between 2011 and 2012, which amounts to a growth rate of 33.8%. Large high tech businesses with 500 or more employees increased by 7.1%, while there were 1.9% additional small businesses with fewer than 50 employees in British Columbia's high tech sector in 2012.

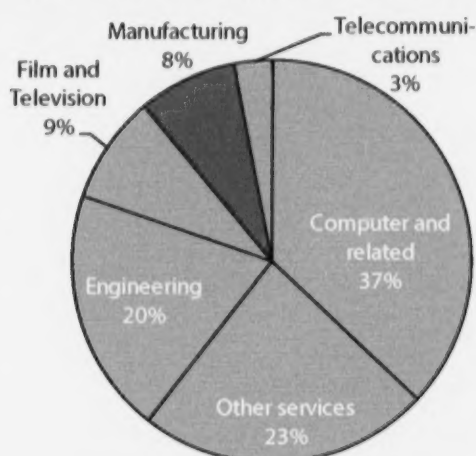
Although most of the growth in high technology business counts was in the service sector, there was also a boost in the number of high tech manufacturing businesses, the first such increase since 2006. The number of high tech manufacturing businesses climbed by 2.4%, while those in the service sector jumped 2.9%, although in absolute numbers, the change in service sector businesses dwarfed that of the manufacturing sector.

3.6.2. Most of B.C.'s high tech businesses are in the service sector

British Columbia's high technology sector is dominated by firms operating in the service sector, which accounts for 92% of all high tech businesses in the province. In 2012, of high technology businesses with employees, 8,291 were in service industries and 719 were manufacturers.

¹¹ Owner-operated firms with no paid employees are not included in the tabulation of business counts.

FIGURE 9: DISTRIBUTION OF B.C.'S HIGH TECH BUSINESSES, 2012



Service sector businesses dominate B.C.'s high tech sector

Computer and related services comprise the largest industry group within B.C.'s high technology sector, with 37% of the province's high tech businesses. "Other services" (24%) and engineering services (20%) are the next two largest high tech industry groups. Environmental and technical consulting industries are the largest component of the "other services" industry group, accounting for more than half of the businesses in that category.

3.6.3. High tech manufacturing firms employ more people

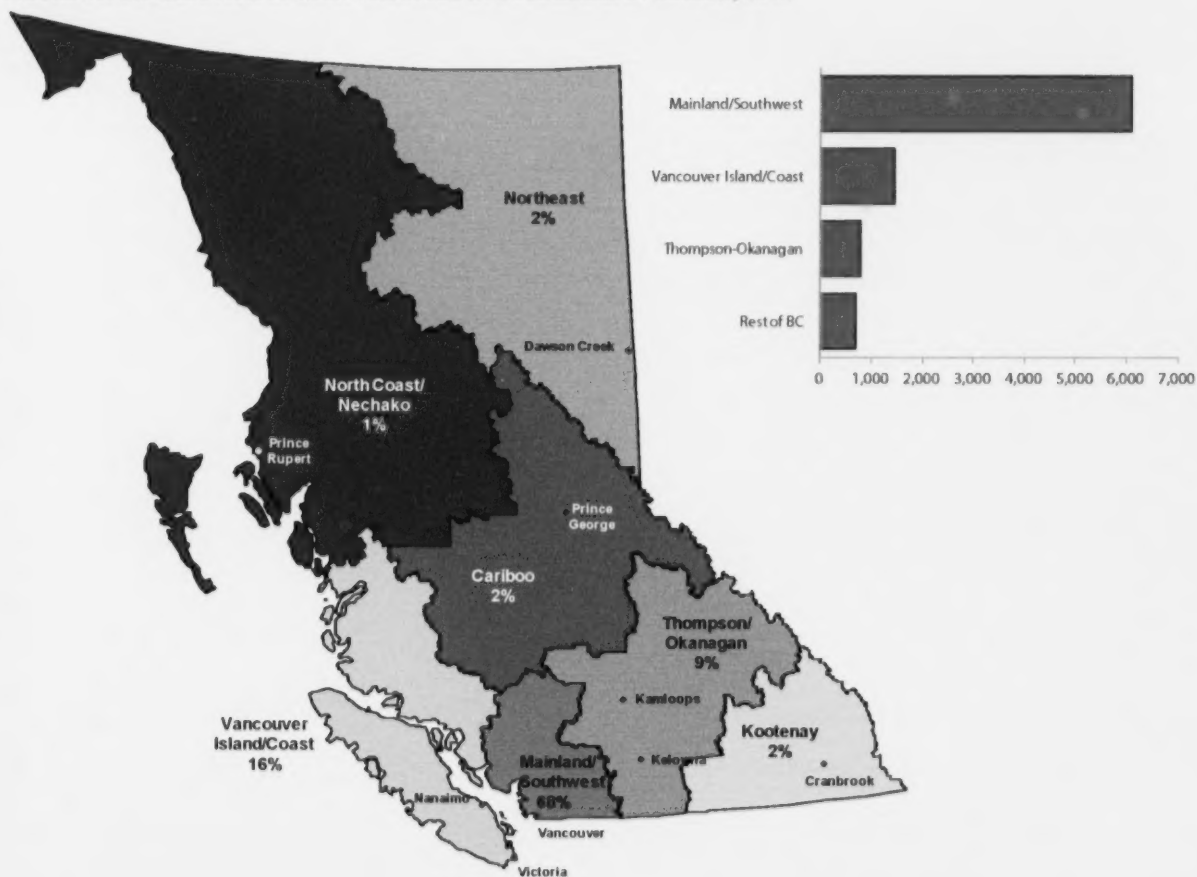
Among British Columbia's high tech businesses, those in the manufacturing sector tend to employ more people, on average, compared to those in the service sector. Of businesses with employees, 10% of high tech manufacturers employed more than 50 workers, compared to less than 4% of high tech service businesses. At the other end of the spectrum, fewer than half (47%) of high tech manufacturers have between one and four employees, while 71% of the businesses in the service sector fit this description.

3.6.4. High tech businesses are located where the people are

High technology businesses are most often located in the areas of the province that are most densely populated. In 2012, more than two-thirds (68%) of British Columbia's high technology businesses were located in the Mainland/Southwest Development Region, with most of those situated in Greater Vancouver. Another 16% of the

province's high tech businesses resided in Vancouver Island/Coast, with the majority of these located in the Capital region, and Thompson-Okanagan was home to 9% of B.C.'s high tech businesses.

FIGURE 10: DISTRIBUTION OF HIGH TECHNOLOGY BUSINESSES BY REGION, 2012



The Mainland/Southwest region is home to the head offices of the largest tech companies in the province, including Telus; MacDonald, Dettwiler and Associates; and Sierra Wireless just to name a few. There are a number of high tech clusters either already established or beginning to develop in the Greater Vancouver region, including alternative energy companies, digital media and gaming developers, biotechnology firms and a burgeoning wireless sector. The region is home to a number of fast-growing high tech companies that are poised to become global leaders, such as HootSuite, Global Relay and Avigilon. After losing 120 of its high technology firms in 2011, the Mainland/Southwest region rebounded by adding 185 net new high tech businesses in 2012, an increase of 3.1% from the previous year.

The Vancouver Island/Coast region has a strong information technology sector that provides software and web development, plus it has a significant presence in engineering, as well as environmental technology. The majority of the region's high tech companies are situated in Greater Victoria, which is the head office location of some of the province's larger high technology companies, including broadband hardware manufacturer Vecima Networks Incorporated and Carmanah Technologies Corporation, a manufacturer of solar powered systems and equipment. High tech businesses are also prevalent in areas outside the Capital region, particularly in the Nanaimo and Comox-Strathcona regions. The number of high tech businesses in the region declined following the global economic downturn, but bounced back slightly in 2012, edging up 0.6%, or eight net new companies.

The Thompson-Okanagan region has a variety of high tech companies, with significant concentrations in engineering and software development. In addition, this region has the potential to become a hub for data storage centres, such as the one built by RackForce in Kelowna and the Telus data centre recently opened in Kamloops. The region's climate and stable seismic environment, combined with an abundance of inexpensive, reliable power, makes it an ideal location for data centres. Thompson-Okanagan experienced strong growth in the number of high technology businesses in the region in 2012, with 46 net new firms, an increase of 6.3%.

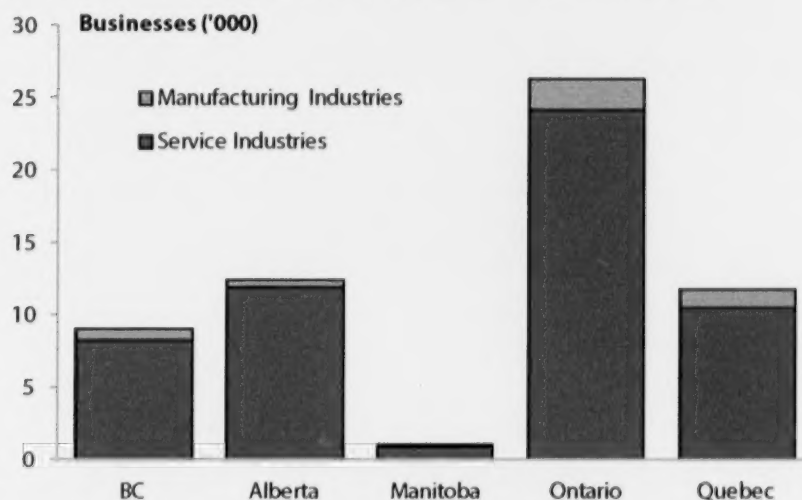
In the remainder of the province, there are a variety of high technology businesses, ranging from telecommunications to environmental technologies, but engineering, software, digital media, and web design and hosting are the most common. Northeast saw the most growth in the number of firms between 2011 and 2012, with 19 net new high tech companies locating in the region, while North Coast (7) and Kootenay (5) also added high tech firms. Cariboo lost a handful of companies and Nechako's total number of high tech firms was one shy of the 2011 count.

3.6.5. Provincial variance in business counts

British Columbia ranks fourth in the country with respect to the number of high technology businesses located in the province. Ontario leads the way with more than twice the number of high tech businesses of second-ranked Alberta. Alberta has more high tech firms than Quebec despite the fact that Quebec has more high tech workers than Alberta. In fact, Quebec has more than two and a half times the number of high tech employees compared to Alberta. Similarly, Manitoba has fewer high tech businesses than the other high tech provinces, even after employment differences are taken into

account. The explanation for these seemingly contradictory numbers is that both Quebec and Manitoba have proportionately fewer small firms and more very large companies compared to the other high tech provinces.

FIGURE 11: COUNTS OF HIGH TECHNOLOGY BUSINESSES BY PROVINCE, 2012



In each province, the high tech sector is dominated by service industries

There are also some significant differences in the distribution of businesses among industries. In Ontario, well over half of all high tech firms (57%) are in the computer and related services sector, compared to just over one quarter of high tech businesses in Alberta. Manitoba has the highest percentage of companies in the manufacturing sector, at 13%, while Alberta has the most high tech service sector industries, at almost 96%.

3.6.6. High tech businesses with no employees

Some high technology industries are ideally suited to self-employment, where the skills, knowledge and energy of the individual are more important than large capital investment. There is currently no perfect measure available of self-employment in the high tech sector as data by industry from Statistics Canada's *Labour Force Survey* are not detailed enough to derive a high tech aggregate. However, counts of businesses with no employees can be used to approximate the number of self-employed with no employees (those with employees are counted in the number of businesses discussed earlier).¹² This

¹² Note that it would be erroneous to add these counts of self-employed to the total number of high technology workers reported elsewhere in this report due to the differences in what is being measured.

is only an approximation because the figure may also include companies that hire only contractors, or companies with unpaid family workers.¹³

BUSINESS COUNTS, 2012

	Without Employees	With Employees
Manufacturing	670	719
Services	30,366	8,291
High Tech Total	31,036	9,010
B.C. Total	709,047	175,950

In 2012, there were 31,036 high tech businesses with no employees, more than triple the count of high tech businesses with employees. As one would expect, businesses involved in manufacturing are far less likely to be composed of self-employed individuals with no employees. Less than half of high tech manufacturers had no employees, compared to 79% of high tech service businesses.

3.7. Commodity Exports and Imports

3.7.1. International trade in high tech goods

International trade is an important aspect of the high technology sector, as reflected in the high volume of two-way trade. The domestic market for high technology goods¹⁴ generally does not have sufficient volume to achieve the economies of scale needed to remain competitive; therefore, access to international markets is extremely important as it allows B.C. producers of high tech goods to focus on market niches. At the same time, B.C. manufacturers do not produce enough of some types of high technology equipment to satisfy the domestic demand from either consumers or the high tech industry itself, and as a result, large volumes of goods are imported into the province.

3.7.2. High tech goods exports saw robust growth in 2012

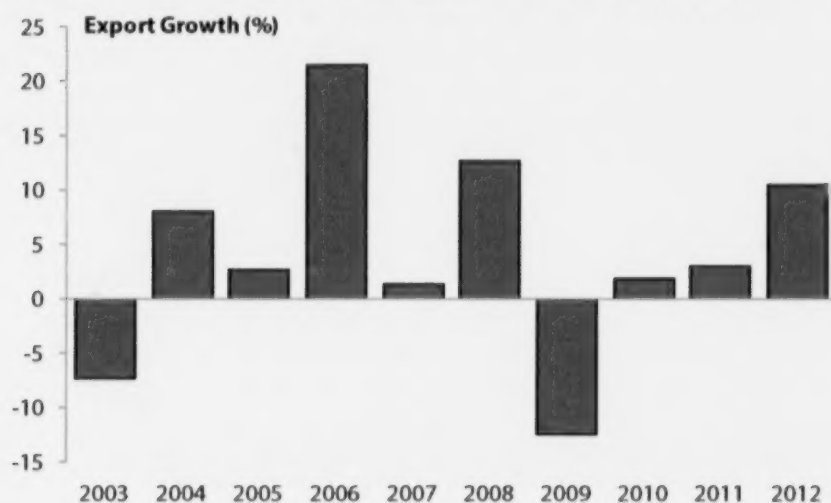
In 2012, the value of British Columbia high technology goods exports jumped 10.5%, to \$994.3 million. This is in sharp contrast to total provincial commodity exports, which fell 4.2%. As a result, the proportion of B.C.'s overall exports comprised of high technology goods climbed to 3.2%. However, the value of high tech product exports has

¹³ For this reason, Statistics Canada classifies these businesses as having an "indeterminate" number of employees.

¹⁴ High technology goods referred to in this document are based on a list developed by the U.S. Bureau of the Census and modified to fit Canadian conditions. See Appendix B, "Defining High Technology Commodities" for more information.

yet to recover to the peak value recorded in 2008 before the global economic downturn reduced demand for many goods, including high tech products. From 2008 to 2009, the value of high tech goods exports dropped 12.4%. Since 2009, B.C.'s high technology exports have climbed 16.0%. Meanwhile, despite the setback in 2012, overall B.C. goods exports have grown 24.0% since 2009.

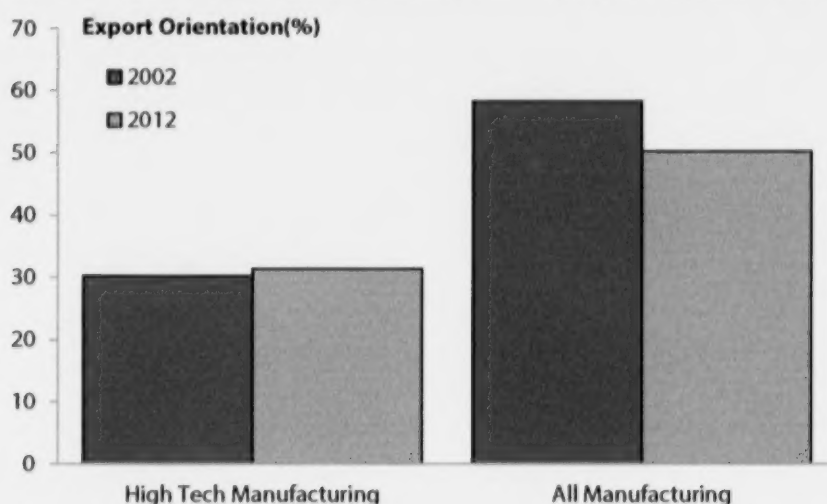
FIGURE 12: GROWTH IN BRITISH COLUMBIA HIGH TECHNOLOGY GOODS EXPORTS



B.C.'s high tech exports recorded their largest increase since the global economic downturn

While exports are an important source of revenue for B.C.'s high tech sector, the province's high technology manufacturing industries tend to be geared more toward the Canadian market, particularly compared to manufacturing in the province in general. In 2012, just over 31% of total high tech goods manufactured in B.C. were exported, compared to 50% for B.C.'s manufacturing sector overall. This gap has narrowed somewhat over the last decade as the proportion of B.C.'s manufactured goods that are exported to international destinations has declined, possibly as a result of an appreciating dollar that has made B.C. products more expensive to foreign buyers.

FIGURE 13: SHARE OF BRITISH COLUMBIA PRODUCTION EXPORTED INTERNATIONALLY



A smaller portion of high technology products are exported abroad compared to total manufacturing

3.7.3. Exports of high tech goods are concentrated in selected commodity groups

Almost two-thirds of B.C.'s high tech exports are concentrated in two commodity groups.¹⁵ In 2012, around 39% of B.C.'s high tech exports were comprised of computers and telecommunications equipment, amounting to \$389.7 million. This was up 3.3% from a year earlier, an increase of \$12.5 million.

B.C. HIGH TECHNOLOGY EXPORTS BY COMMODITY GROUP – 2012

	\$ millions	% change 2011/2012
Computers and Telecommunications	389.7	3.3
Aerospace	247.0	33.2
Life Sciences	151.6	-3.6
Computer Integrated Manufacturing	134.5	12.2
Opto-Electronics	34.0	-18.4
Electronics	27.8	166.0
Biotechnology	3.9	52.9
Material Design	3.6	224.9
Weapons and Nuclear	2.3	-50.0
Total	994.3	10.5

Aerospace products represented another quarter of B.C.'s high technology commodity exports. British Columbia exporters shipped \$247.0 million worth of aerospace products to international destinations in 2012, which represented a 33.2% jump from 2011. The bulk of that increase was due to a 38.1% boost in shipments to the United States. That alone accounted for 83% of the growth in aerospace exports from British Columbia.

¹⁵ For information on high technology commodity groups, see Appendix B.

Other significant tech exports from the province were life sciences products (15%) and computer integrated manufacturing (14%). The remaining commodity groups accounted for just over 7% of B.C.'s tech exports.

3.7.4. The U.S. is the primary destination for B.C. high tech exports

In 2012, the United States was the destination for approximately 61% of British Columbia's high technology commodity exports. This is well down from the peak of 84% recorded in 2000; however, B.C.'s high tech sector is still proportionately more dependent on the U.S. market for export sales than are the province's exports overall. In 2012, only 44% of B.C.'s total goods exports were shipped to the United States.

B.C. HIGH TECHNOLOGY EXPORTS BY DESTINATION – 2012

	\$ millions	% change 2011/2012
United States	608.4	13.3
European Union	145.0	-1.6
Germany	34.7	16.4
United Kingdom	21.9	-19.1
Italy	20.2	-24.0
Pacific Rim	121.3	20.6
Japan	23.7	125.9
Mainland China	20.7	6.2
Australia	18.3	-0.1
Rest of the world	119.7	3.9
Total	994.3	10.5

The value of B.C. exports of high technology goods to the U.S. was also at its peak in 2000, with \$773.0 million worth of high tech goods shipped to the United States that year, a figure that has not since been achieved again. The bursting of the high tech bubble in 2001 was the main reason for the precipitous decline in tech exports between 2000 and 2001. While that is one reason for the drop in the proportion of high tech goods exports destined for the United States, market diversification accounts for most of the change.

Shipments to the European Union, in particular, have grown significantly over the last decade. In 2002, the European Union received 9% of B.C.'s high tech exports. That share climbed to 19% in 2008, but has slipped back to 15% in 2012. Exports to Pacific Rim countries, which dropped as low as 4% in 2001 following the bursting of the high tech bubble, have rebounded somewhat to roughly 12% of exports, but are still well below peak levels attained in the mid-nineties.

However, high technology exports to the United States grew 13.3% in 2012, slightly faster than the 10.5% rate of increase of high tech exports overall, which resulted in a small increase in the U.S. share relative to 2011. Shipments of high tech products to the European Union edged down 1.6% in 2012, while exports to the Pacific Rim jumped 20.6%. A 125.9% expansion in shipments of high tech products to Japan was the main driver of the increase in exports to the Pacific Rim. Most of this was due to \$10.4 million in shipments of particle accelerators in 2012 compared to none a year earlier.

3.7.5. Mode of transport of high tech goods depends on destination

The mode of transport of high technology goods exported from the province depends largely on the destination of those goods and, to a lesser extent, on the types of goods being shipped. In 2012, approximately 63% of B.C.'s high tech goods shipped to the United States were transported over land by truck or rail, with the remainder shipped by airfreight. For all other countries, the bulk of goods were transported by airfreight (85%), with only 12% shipped by sea and 4% over land.¹⁶

B.C. HIGH TECHNOLOGY EXPORTS BY DESTINATION AND MODE OF TRANSPORT - 2012

	Mode of transport	\$ millions	% of region	% of total high tech exports
United States	Land	384.4	63.2	38.7
	Sea	0.0	0.0	0.0
	Air	224.0	36.8	22.5
	Total	608.4	100.0	61.2
All Other Countries	Land	14.1	3.7	1.4
	Sea	45.3	11.7	4.6
	Air	326.5	84.6	32.8
	Total	385.9	100.0	38.8
Total	Land	398.6	40.1	40.1
	Sea	45.3	4.6	4.6
	Air	550.5	55.4	55.4
	Total	994.3	100.0	100.0

While there is some year-to-year variation in the mode of transport of B.C.'s high tech goods as a result of changes in both the types of goods shipped and the intended destination of those goods, the mode used is generally split between shipping over land or by air. The proportion of goods shipped by sea has been climbing in recent years, but with the exception of a one-time jump in 2008, when almost 10% of B.C.'s high tech exports were shipped by sea, the share of high tech goods that travel by boat has been

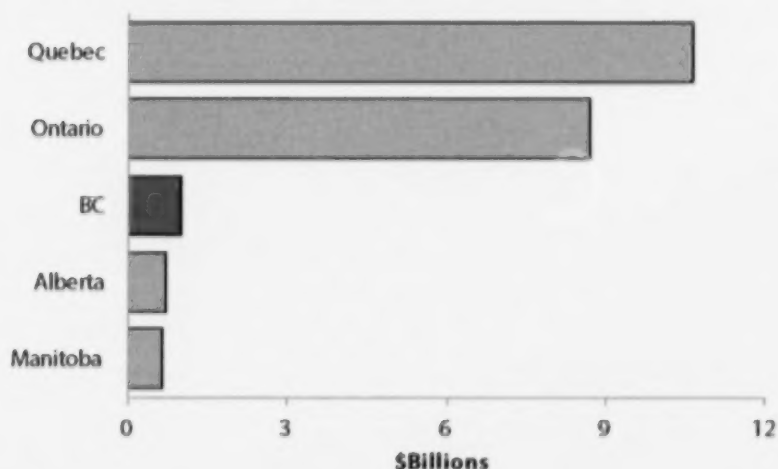
¹⁶ Note that the shipments by land to destinations other than the United States are not all destined for Mexico. Goods destined for overseas destinations may leave B.C. by truck or rail to points of departure in the United States where they are loaded onto ships or planes for the remainder of their journey.

restricted to less than 5%. The 2008 anomaly was due to a one-time shipment of semiconductor products to the European Union. With the focus of B.C.'s high technology exports shifting away from the United States, the main mode of transport has moved from road and rail to airfreight. In 2012, over 55% of B.C.'s high tech exports were transported by airfreight, with 40% moved over land by road or rail and just under 5% transported by sea.

3.7.6. B.C. ranks third in the country in terms of high tech exports

The value of British Columbia's exports of high technology goods is relatively small compared to Canada's manufacturing hubs of Quebec and Ontario. Given the relative size of their economies, one would expect B.C. to lag behind these two provinces; however, even taking that into account, the slightly less than \$1 billion in exports of high tech goods from B.C. in 2012 was still comparatively modest.

FIGURE 14: EXPORTS OF HIGH TECHNOLOGY GOODS BY PROVINCE, 2012



B.C.'s exports of high tech goods are relatively small

Quebec led all provinces in exports of high technology goods, shipping approximately \$10.6 billion worth of high tech products to international destinations in 2012. Quebec's world-class aerospace industry was the source of the bulk of these goods (76%). High technology products comprise a far greater share of Quebec's overall commodity exports compared to other provinces. In 2012, around 17% of the province's goods exports consisted of high technology products, compared to the national average of 5%.

Ontario ranked second behind Quebec in terms of high tech exports, shipping \$8.7 billion worth of high tech goods in 2012. Combined, these two provinces were the source of 87% of Canada's high technology commodity exports.

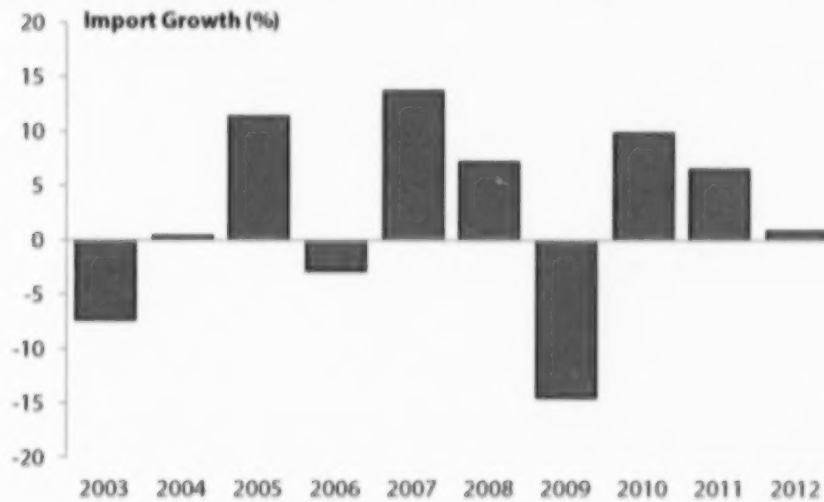
In 2012, high tech goods made up just over 3% of B.C.'s overall commodity exports, but the just shy of \$1 billion worth of goods shipped from the province was enough to rank B.C. third in the country. Prior to 2008, British Columbia had almost always trailed behind Alberta (with the exception of 1993), but three consecutive years of double-digit declines from 2007 to 2009 almost halved the value of Alberta's high tech exports and growth since then has been slower than that in British Columbia. The \$0.7 billion in high tech exports from Alberta in 2012 is just a fraction of the peak of \$4.4 billion achieved in 2000 when a substantial boost in computer equipment exported to the United States inflated the value of shipments, before falling to \$2.4 billion the next year in the throes of the high tech meltdown. Since then, Alberta's high tech exports have declined in most years with just a few exceptions, including a 3.2% boost in 2012. In 2009, Alberta actually fell behind Manitoba, to rank fifth in the country, but Manitoba has since slipped back to fifth in exports of high tech goods.

In terms of growth, British Columbia performed best among the high tech provinces in 2012, with its 10.5% jump in high tech goods exports. Shipments of high tech products from Manitoba increased 7.0% and there was a 3.2% jump in Alberta. Exports of high tech goods from Ontario were fairly flat in 2012, with only 0.2% growth, well behind the national average of 1.6%. Quebec was the only high tech province to see a decline in exports of high tech products, experiencing a 1.3% drop in shipments.

3.7.7. Imports of high technology goods edged up in 2012

While B.C.'s high tech commodity exports experienced a progression of growth following the downturn in 2009, culminating in the 10.5% jump in 2012, the opposite was true for imports. After slumping 14.4% in 2009, B.C.'s high technology goods imports rebounded quickly with a 9.9% increase the following year, but growth slowed to 6.5% in 2011 and all but stalled at only 0.9% in 2012.

FIGURE 15: GROWTH IN B.C. IMPORTS OF HIGH TECHNOLOGY GOODS



Imports of high technology products into B.C. experienced very little growth in 2012

The growth in imports was mixed depending on the origin of the goods. High tech commodity imports from Mainland China climbed 6.2% in 2012 to \$1.6 billion, while shipments from the United States rose 7.1% to \$1.4 billion. Mainland China surpassed the U.S. in 2010 to become the top source of high tech goods imported into the province, but the United States remains the second largest source of high tech goods for British Columbia. Together, the two countries accounted for 60% of B.C.'s high tech commodity imports in 2012. Mainland China has increased its share of B.C.'s high tech imports from just 5% in 2002 to 32% a decade later.

Despite the strong growth in imports from Mainland China, high tech commodity imports from the Pacific Rim as a whole stalled in 2012, inching up only 0.1%. This was the same rate of growth for B.C.'s imports of high tech goods from the European Union. Substantial declines in imports from South Korea (-38.0%) and Taiwan (-25.7%) tempered overall growth in imports from the Pacific Rim, while a 44.4% drop in shipments from the Netherlands, combined with flagging imports from the United Kingdom (-14.5%) and France (-11.0%), affected the growth in imports from the European Union. Fewer imports of computer and telecommunications goods were the main reason for the drop in shipments from South Korea and Taiwan, while a substantial decline in imports of biotechnology products was mainly responsible for the fall in imports from the Netherlands.

In 2012, imports of high tech products from Mexico into British Columbia fell 11.9%. However, the \$529.8 million in high tech goods imported from Mexico in 2012 still exceeded the value of high tech goods imported from all of the European Union

countries combined (\$515.1 million). Mexico was the third largest source of high tech commodity imports into British Columbia, accounting for just under 11% of B.C.'s high tech goods imports in 2012.

3.7.8. Import growth varied by type of high tech product

As with exports, computer and telecommunications goods are by far the largest category of high technology imports. In 2012, B.C. imported almost \$3 billion worth of these goods, representing 59% of total high tech product imports. Life sciences products ranked second with around \$0.7 billion in imports, or 13% of high tech goods imported into the province.

B.C. HIGH TECHNOLOGY IMPORTS BY COMMODITY GROUP - 2012

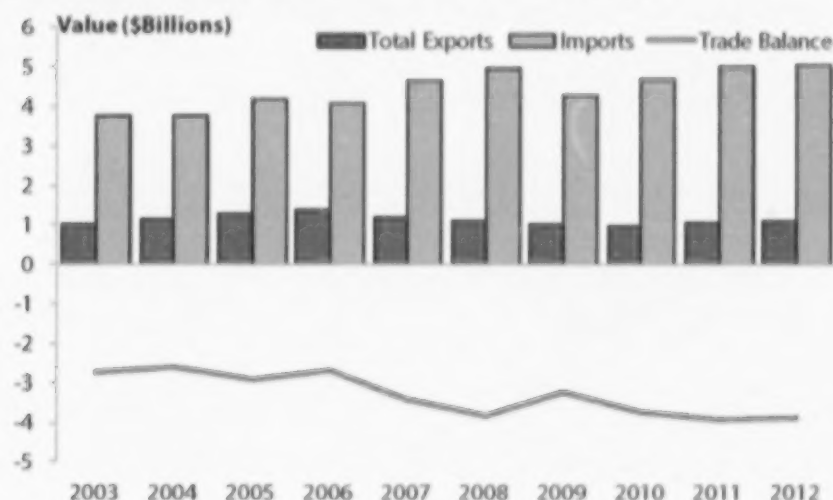
	\$ millions	% change 2011/2012
Computers and Telecommunications	2,951.0	-0.5
Life Sciences	667.2	8.4
Aerospace	409.1	7.8
Opto-Electronics	271.5	-13.4
Electronics	270.0	-11.9
Computer Integrated Manufacturing	236.7	24.9
Biotechnology	153.9	7.3
Material Design	44.5	5.3
Weapons and Nuclear	20.6	-12.4
Total	5,024.2	0.9

There was a wide variation in import growth depending on the type of commodity. The largest increase in the value of high tech imports into B.C. was for computer integrated manufacturing products, at 24.9%. In terms of absolute numbers, imports of life sciences goods had the largest growth in value, with an increase in imports of \$51.6 million, or 8.4%. The largest decline, both in percentage and value, was for imports of opto-electronics, a drop of \$41.9 million, or 13.4%.

3.7.9. B.C.'s high tech trade deficit shrank in 2012

British Columbia imports far more high technology goods than it exports and, as a result, the province runs a substantial trade deficit in these commodities. In 2012, this trade gap narrowed as exports grew far faster than imports. Nevertheless, the deficit was still \$3.9 billion, or nearly four times the total value of B.C.'s high tech exports. In 2012, the value of high technology goods imported into British Columbia was over five times that of high tech exports from the province.

FIGURE 16: B.C. HIGH TECHNOLOGY BALANCE OF TRADE IN GOODS



B.C. imports far more high tech goods than it exports

The growth in B.C.'s high tech exports to Mainland China has not kept pace with the phenomenal increase in imports from that country and, as a result, B.C.'s high tech goods trade deficit with China has climbed to almost \$1.6 billion, making it British Columbia's largest high tech trade deficit. The next largest deficit in trade in high tech goods is with the United States, at \$0.8 billion, followed by Mexico, at \$0.5 billion, which exceeds the combined deficit with all countries of the European Union (\$0.3 billion). B.C. exports very few high tech goods to Mexico, but imports a large amount, accounting for the substantial deficit.

B.C. BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS BY COMMODITY GROUP – 2012

	\$ millions
Weapons and Nuclear	-18.1
Material Design	-40.7
Aerospace	-89.5
Computer Integrated Manufacturing	-100.3
Biotechnology	-150.0
Electronics	-235.7
Opto-Electronics	-235.8
Life Sciences	-510.8
Computers and Telecommunications	-2,520.5
Total	-3,901.3

The trade deficit spans across all commodity groups. As one might expect, the largest deficits are for goods with the highest volumes of trade. The trade deficit for computers and telecommunications alone is two and a half times the value of all B.C. high tech commodity exports combined.

3.7.10. The United States exports and imports relatively more high technology goods than Canada

High technology products are a much more significant portion of overall commodity trade in the United States compared to Canada. In 2012, the United States exported \$226.0 billion worth of high tech commodities,¹⁷ which represented almost 17% of total U.S. domestic exports (compared to just over 5% for Canada and slightly more than 3% for British Columbia). Among the provinces, only Quebec, at 17%, has a comparable ratio of high tech to overall goods exports.

High tech products also make up a larger share of total imports into the United States, although the difference is much smaller. In 2012, just over 17% of imports into the United States consisted of high technology goods, compared to slightly less than 12% of imports into Canada.

In 2012, there was an increase of 7.6% in the value of American domestic exports of high technology goods, while imports climbed 3.5% to \$395.9 billion. As recently as 1997, the United States had a surplus in trade of high tech goods exceeding \$45 billion, but strong growth in imports, particularly from Mainland China, coupled with much smaller increases in exports has put American trade in high technology goods into a growing deficit position over the last 11 years. This deficit peaked at \$98.6 billion in 2011, before falling to \$90.9 billion in 2012.¹⁸ The United States' high tech trade deficit with China alone was \$119.0 billion in 2012. The next largest deficit was with Ireland, at \$16.4 billion. At the other end of the scale, the United States' largest surplus in trade of high technology goods was with Canada, at \$15.3 billion.

3.8. Service Exports

3.8.1. Exports of high tech services dropped in 2012

Exports of services are defined as all services provided by B.C. residents to non-residents. For example, service exports take place when B.C.-based professionals, such as engineers or software programmers, work for a period of time outside the province. Service exports

¹⁷ All figures for U.S. trade are denominated in Canadian dollars and growth rates are calculated using these figures.

¹⁸ Note that the balance of trade is calculated by taking the difference of total exports (including re-exports) and subtracting imports. The \$226.0 billion export figure for 2012 excludes re-exports, which were \$78.9 billion.

also occur when, for example, an engineering firm produces a study in its B.C. office for an overseas client or when a software developer creates a new program that is delivered on-line to a client in another country.

It is generally more difficult to measure service exports, compared to exports of goods. Whereas goods exports are tracked through customs documents, providing an administrative record that can be used for statistical purposes, this is not usually the case with regard to service exports. Rather, service exports have to be estimated using surveys and other available information.

While B.C. exports of high technology goods experienced strong growth in 2012, the same was not true for exports of high tech services, which fell 3.2%.¹⁹ The largest decline was in exports of professional, scientific and technical services, which dropped 7.8%. These services accounted for almost half of B.C.'s high tech service exports in 2012. Exports of computer-related services also experienced a decline, slipping 2.3%. However, exports of all other high technology services climbed 7.4%.

B.C. HIGH TECHNOLOGY SERVICE EXPORTS – 2012

	\$ millions	% change 2011/2012
Computer-Related Services	603	-2.3
Professional, Scientific and Technical Services	1,023	-7.8
Other Services	450	7.4
Total	2,076	-3.2

The high technology sector in British Columbia exports far more services than goods. In 2012, services represented two-thirds of B.C.'s total high technology exports (i.e., goods plus services).

¹⁹ Note that the methodology to measure service exports has been revised and there have been significant changes to previously published figures.

4. Conclusion

4.1. B.C.'s high technology sector is small, but growing

Compared to other jurisdictions, particularly American states, British Columbia's high technology sector is relatively small. However, the sector continues to play an important role in the provincial economy. High technology industries in B.C. employ more people than the province's traditional economic powerhouses, the forestry and mining industries, combined. While the sector as a whole may not rank prominently compared to other high tech jurisdictions, B.C. is home to high tech clusters, such as digital media and biotechnology, which are positioned among the best in the world.

B.C.'s high tech sector continues to face challenges, such as a smaller domestic marketplace and an often tight labour market, which may give B.C. companies a competitive disadvantage, particularly with many of their American counterparts, but also with high tech firms in central Canada. Nevertheless, given the significance of high technology products in today's world and the combination of lucrative revenues and well-paid employment high tech industries offer, there is little doubt that high technology will remain a priority sector.

5. Detailed Tables

The tables in this section include a notation of “r” to indicate data that have been revised from previous editions and “p” to indicate that the data are preliminary. Most data for 2012 are denoted as preliminary, which should not be construed to mean there are problems with the data, but rather that they are based on information that itself is preliminary and therefore subject to greater revision than data for previous years.

Note that the tables are available in electronic form on the BC Stats website:
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/BusinessIndustry/HighTechnology.aspx>

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TABLE 1. BRITISH COLUMBIA GROSS DOMESTIC PRODUCT (GDP) (CONSTANT DOLLAR) AT BASIC PRICES, BY INDUSTRY

Chained 2007 \$ million ¹						
INDUSTRY	2007	2008	2009	2010	2011	2012 ^P
Manufacturing	1,382	1,439	1,320	1,645	1,607	1,666
Services	11,114	11,350	11,189	11,856	12,149	12,555
Telecommunications and Film ²	5,184	5,212	5,389	5,939	6,033	6,138
Engineering services	2,092	2,254	2,170	2,118	2,277	2,544
Computer and related services	2,631	2,661	2,470	2,556	2,610	2,608
Other services	1,207	1,228	1,175	1,267	1,269	1,319
High Technology Sector Total	12,497	12,655	12,539	13,393	13,583	14,040
BC Industrial Aggregate	181,496	183,419	178,394	183,658	188,475	191,749
% change from previous year						
INDUSTRY	2008	2009	2010	2011	2012 ^P	
Manufacturing	4.1	-8.3	24.6	-2.3	3.7	
Services	2.1	-1.4	6.0	2.5	3.3	
Telecommunications and Film ²	0.5	3.4	10.2	1.6	1.7	
Engineering services	7.7	-3.7	-2.4	7.5	11.7	
Computer and related services	1.1	-7.1	3.5	2.1	-0.1	
Other services	1.7	-4.3	7.9	0.2	3.9	
High Technology Sector Total	1.3	-0.9	6.8	1.4	3.4	
BC Industrial Aggregate	1.1	-2.7	3.0	2.6	1.7	

1. Note that for chained data, the aggregates are not equal to the sum of their components and, therefore, the sum of the industries will not necessarily equal the "all industries" total.

2. The telecommunications and motion picture production and post-production industries have been combined due to confidentiality requirements.

^P Preliminary

Source: BC Stats and Statistics Canada

TABLE 2. BRITISH COLUMBIA GROSS DOMESTIC PRODUCT (GDP) (CURRENT DOLLAR) AT BASIC PRICES, BY INDUSTRY

TABLE 2: BRITISH COLUMBIA GROSS DOMESTIC PRODUCT (GDP) (AGGREGATE) (2007 TO 2012) ^a						
INDUSTRY	\$ million					
	2007 ^b	2008 ^c	2009 ^d	2010	2011	2012 ^e
Manufacturing	1,382	1,313	1,284	1,419	1,459	1,498
Services	11,114	11,470	11,236	11,358	13,530	13,983
Telecommunications and Film ^f	5,184	5,379	5,237	5,228	5,973	5,780
Engineering services	2,092	2,138	1,933	1,975	2,265	2,570
Computer and related services	2,631	2,707	2,884	2,852	3,142	3,343
Other services	1,207	1,246	1,182	1,303	2,150	2,291
High Technology Sector Total	12,497	12,783	12,520	12,777	14,989	15,482
BC Industrial Aggregate	181,571	189,418	181,675	191,090	199,022	203,707
High Technology as a % of Total	6.9	6.7	6.9	6.7	7.5	7.6
% change from previous year						
INDUSTRY	2008 ^g	2009 ^h	2010	2011	2012 ⁱ	
Manufacturing	-5.0	-2.2	10.5	2.8	2.7	
Services	3.2	-2.0	1.1	19.1	3.4	
Telecommunications and Film ^f	3.8	-2.6	-0.2	14.3	-3.2	
Engineering services	2.2	-9.6	2.2	14.6	13.5	
Computer and related services	2.9	6.6	-1.1	10.2	6.4	
Other services	3.2	-5.1	10.3	65.0	6.6	
High Technology Sector Total	2.3	-2.1	2.1	17.3	3.3	
BC Industrial Aggregate	4.3	-4.1	5.2	4.2	2.4	

1. The telecommunications and motion picture production and post-production industries have been combined due to confidentiality requirements.

¹ Revised

^P Preliminary

Source: BC Stats and Statistics Canada

TABLE 3. BRITISH COLUMBIA GROSS DOMESTIC PRODUCT (GDP) AT BASIC PRICES, SELECTED ACTIVITIES

	Chained 2007 \$ million ¹										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Goods-producing industries	39,786	40,753	43,169	45,761	46,917	46,806	46,460	42,225	44,236	46,137	46,887
Agriculture, forestry, fishing and hunting	3,764	3,822	4,119	4,127	4,066	3,926	3,604	3,001	3,269	3,484	3,416
Crop and animal production	1,017	1,009	1,015	1,021	1,030	1,084	1,084	1,059	1,061	1,082	1,072
Forestry and logging	1,898	1,931	2,187	2,168	2,113	1,998	1,776	1,199	1,502	1,676	1,651
Fishing, hunting and trapping	187	183	187	182	204	159	137	146	139	142	140
Support activities for agriculture and forestry	695	739	714	757	727	685	608	609	573	590	558
Mining, oil and gas extraction	9,630	9,431	9,375	10,184	10,196	9,678	9,937	8,901	9,940	10,236	10,186
Utilities	3,320	3,328	3,296	3,783	3,370	3,827	3,831	3,662	3,561	3,900	3,927
Construction	9,548	10,451	11,580	12,240	13,477	13,722	14,573	13,949	14,080	14,858	15,524
Manufacturing	13,415	13,625	14,553	15,242	15,722	15,653	14,457	12,612	13,422	13,635	13,758
Non-durable manufacturing	5,601	5,707	5,715	5,804	5,834	5,832	5,728	5,191	5,435	5,381	5,269
Durable manufacturing	7,814	7,917	8,862	9,442	9,888	9,821	8,712	7,379	7,960	8,259	8,536
Service-producing industries	112,131	115,163	119,312	124,385	129,793	134,690	136,984	136,179	139,486	142,443	144,985
Wholesale trade	6,369	6,682	6,867	7,120	7,450	8,037	7,875	7,167	7,558	7,680	7,844
Retail trade	8,311	8,593	9,057	9,595	10,366	10,895	10,906	10,601	11,021	11,200	11,414
Transportation and warehousing	8,593	8,661	8,993	9,805	9,998	10,020	9,989	9,758	10,218	10,581	10,844
Information and cultural services	5,632	6,093	6,304	6,699	6,854	6,982	7,063	6,811	6,796	6,838	6,937
Finance and insurance	8,515	8,515	9,317	9,615	10,405	10,803	10,623	10,420	10,669	10,874	10,948
Real estate and rental and leasing	23,353	24,140	25,229	26,499	27,399	28,590	29,256	30,307	31,321	32,471	33,362
Professional, scientific and technical services	7,427	7,701	8,094	8,541	9,343	10,624	10,416	9,791	9,821	10,030	10,302
Management of companies and enterprises	1,285	1,231	1,261	1,245	1,290	1,304	1,389	1,337	1,347	1,365	1,377
Administration and support, waste mgmt.	3,404	3,467	3,773	4,193	4,393	4,633	4,729	4,409	4,496	4,514	4,583
Education	8,270	8,481	8,659	8,978	9,191	9,523	9,956	9,997	10,179	10,426	10,605
Health care and social assistance	11,092	11,865	11,417	11,327	11,685	11,896	12,341	12,767	13,015	13,301	13,545
Arts, entertainment and recreation	1,647	1,634	1,605	1,681	1,778	1,848	1,812	1,850	1,898	1,863	1,876
Accommodation and food services	4,656	4,703	4,901	5,014	5,125	5,241	5,196	5,183	5,197	5,154	5,197
Other services	3,582	3,700	3,788	3,954	4,127	4,190	4,273	4,220	4,259	4,378	4,397
Public administration	9,868	9,929	9,940	10,032	10,340	10,706	11,152	11,529	11,662	11,757	11,736
GDP at basic prices	152,299	156,209	162,546	170,241	176,774	181,496	183,419	178,294	183,658	188,475	191,749
	% change from previous year										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Goods-producing industries	2.7	2.4	5.9	6.0	2.5	-0.2	-0.7	-9.1	4.8	4.3	1.6
Agriculture, forestry, fishing and hunting	-1.0	1.5	7.8	0.2	-1.5	-3.4	-8.2	-16.7	8.9	6.6	-1.9
Crop and animal production	-7.1	-0.8	0.5	0.6	0.9	5.2	0.0	-2.3	0.1	2.0	-0.9
Forestry and logging	2.5	1.7	13.3	-0.9	-3.5	-5.4	-11.1	-32.5	25.3	11.5	-1.4
Fishing, hunting and trapping	18.8	-2.8	15.0	-2.6	12.2	-22.2	-13.7	6.4	-4.7	1.7	-1.3
Support activities for agriculture and forestry	-10.0	6.3	-3.3	6.0	-4.0	-5.7	-11.2	0.1	-5.9	2.9	-5.5
Mining, oil and gas extraction	3.0	-2.1	-0.6	8.6	0.1	-5.1	2.7	-10.4	11.7	3.0	-0.5
Utilities	18.8	0.3	-1.0	14.7	-10.9	13.6	0.1	-4.4	-2.8	9.5	0.7
Construction	5.1	9.5	10.8	5.7	10.1	1.8	6.2	-4.3	0.9	5.5	4.5
Manufacturing	-0.7	1.6	6.8	4.7	3.1	-0.4	-7.0	-12.8	6.4	1.8	0.9
Non-durable manufacturing	-1.7	1.9	0.1	1.6	0.5	0.0	-1.8	-9.4	4.7	-1.0	-2.1
Durable manufacturing	1.3	1.4	11.4	6.6	4.7	-0.7	-11.3	-15.3	7.9	3.8	3.4
Service-producing industries	3.3	2.7	3.6	4.3	4.3	3.8	1.7	-0.6	2.4	3.1	1.8
Wholesale trade	5.9	4.9	2.8	3.7	4.6	7.9	-2.0	-9.0	5.5	1.0	2.1
Retail trade	2.7	3.4	5.4	5.9	8.0	5.1	0.1	-2.8	4.0	1.6	1.9
Transportation and warehousing	1.0	0.8	3.8	9.0	2.0	0.2	-0.3	-2.3	4.7	3.6	2.5
Information and cultural services	13.4	8.2	3.5	6.3	2.3	1.9	1.2	-3.6	-0.2	0.6	1.5
Finance and insurance	1.4	2.4	9.4	3.2	8.2	3.8	-1.7	-1.9	2.4	1.9	0.7
Real estate and rental and leasing	4.4	3.4	4.5	5.0	3.4	4.3	2.5	3.6	3.3	3.7	2.7
Professional, scientific and technical services	2.2	3.7	5.1	5.5	9.4	7.3	3.9	-0.0	0.3	2.1	2.7
Management of companies and enterprises	0.2	-4.1	2.4	-1.3	3.6	1.0	0.6	-4.5	1.5	1.2	1.0
Administration and support, waste mgmt.	5.9	1.8	8.8	11.1	4.6	5.5	2.1	-6.8	2.0	0.4	1.5
Education	1.0	2.6	2.1	3.7	2.4	3.6	4.5	0.4	1.8	2.4	1.7
Health care and social assistance	0.7	1.5	-3.8	-0.8	3.2	1.8	3.7	3.5	1.9	2.2	1.8
Arts, entertainment and recreation	1.9	-0.8	3.6	-0.7	5.8	3.9	-1.9	2.1	2.6	-1.8	0.7
Accommodation and food services	1.2	1.0	4.2	2.3	2.2	2.3	-0.9	-0.2	0.3	-0.8	0.8
Other services	4.6	3.3	2.4	4.4	4.4	1.5	2.0	-1.2	0.9	2.6	0.6
Public administration	2.8	0.6	0.1	0.9	3.1	3.5	4.2	3.4	1.2	0.8	-0.2
GDP at basic prices	3.1	2.6	4.0	4.7	2.8	2.7	1.1	-2.7	3.0	2.6	1.7

1. Note that for chained data, the aggregates are not equal to the sum of their components and, therefore, the sum of the industries will not necessarily equal the "all industries" total.

Source: Statistics Canada

TABLE 4. HIGH TECHNOLOGY GDP (CONSTANT DOLLAR) AT BASIC PRICES, BY PROVINCE

		Chained 2007 \$ million ¹					
Province		2007	2008	2009	2010	2011	2012 ^P
Canada	Manufacturing	27,101	27,554	26,278	26,101	25,293	23,998
	Services	79,442	81,972	81,978	83,976	87,619	90,037
	Total	106,543	109,004	108,283	109,343	112,607	112,755
British Columbia	Manufacturing	1,382	1,439	1,320	1,645	1,607	1,666
	Services	11,114	11,350	11,189	11,856	12,149	12,555
	Total	12,497	12,655	12,539	13,393	13,583	14,040
Alberta	Manufacturing	902	887	785	715	785	948
	Services	13,001	12,906	12,406	12,105	12,741	13,312
	Total	13,903	13,779	13,161	12,756	13,348	14,036
Manitoba	Manufacturing	809	796	802	826	773	844
	Services	1,685	1,741	1,679	1,699	1,667	1,675
	Total	2,493	2,539	2,436	2,580	2,447	2,533
Ontario	Manufacturing	13,402	14,016	13,044	12,832	12,685	11,372
	Services	32,095	32,608	32,493	32,499	33,434	34,173
	Total	45,496	45,604	45,154	43,825	44,436	44,228
Quebec	Manufacturing	10,324	10,571	9,693	10,116	9,625	9,001
	Services	15,407	16,022	16,122	16,273	16,689	16,834
	Total	25,731	26,176	25,206	25,659	25,761	24,695
		% change from previous year					
Province		2008	2009	2010	2011	2012 ^P	
Canada	Manufacturing	1.7	-4.6	-0.7	-3.1	-7.5	
	Services	3.2	0.0	2.4	4.3	2.8	
	Total	2.3	-0.7	1.0	3.0	0.1	
British Columbia	Manufacturing	4.1	-8.3	24.6	-2.3	3.7	
	Services	2.1	-1.4	6.0	2.5	3.3	
	Total	1.3	-0.9	6.8	1.4	3.4	
Alberta	Manufacturing	-1.7	-11.5	-9.0	9.8	20.7	
	Services	-0.7	-3.9	-2.4	5.3	4.5	
	Total	-0.9	-4.5	-3.1	4.6	5.2	
Manitoba	Manufacturing	-1.6	0.8	3.0	-6.4	9.1	
	Services	3.4	-3.6	1.2	-1.9	0.5	
	Total	2.6	-4.8	6.3	-5.5	3.5	
Ontario	Manufacturing	4.6	-6.9	-1.6	-1.8	-9.8	
	Services	1.6	-0.4	0.0	2.9	2.8	
	Total	0.2	-1.8	-2.9	1.4	-0.5	
Quebec	Manufacturing	2.4	-8.3	4.4	-4.9	-6.5	
	Services	4.0	0.6	0.9	2.6	0.9	
	Total	1.7	-3.7	1.8	0.4	-4.1	

1. Note that for chained data, the aggregates are not equal to the sum of their components and, therefore, the sum of the industries will not necessarily equal the "all industries" total.

^P Preliminary

Source: BC Stats

TABLE 5. HIGH TECHNOLOGY GDP (CURRENT DOLLAR) AT BASIC PRICES, BY PROVINCE AND THE UNITED STATES

		Cdn \$ million					
Region		2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
Canada	Manufacturing	27,161	27,737	27,527	27,735	28,893	26,940
	Services	79,442	83,747	85,892	89,920	104,041	110,120
	Total	106,543	111,484	113,419	117,655	132,933	137,059
British Columbia	Manufacturing	1,382	1,313	1,284	1,410	1,439	1,498
	Services	11,114	11,470	11,238	11,358	13,530	13,983
	Total	12,497	12,783	12,520	12,777	14,969	15,482
Alberta	Manufacturing	902	892	847	788	771	925
	Services	13,001	13,367	13,599	14,113	16,322	17,661
	Total	13,903	14,259	14,445	14,901	17,094	18,587
Manitoba	Manufacturing	809	798	770	845	825	905
	Services	1,685	1,763	1,831	1,920	2,069	2,095
	Total	2,493	2,561	2,601	2,765	2,894	3,000
Ontario	Manufacturing	13,402	13,438	13,727	13,125	13,608	12,097
	Services	32,095	33,433	35,238	37,231	42,803	44,793
	Total	45,496	46,870	48,964	50,356	56,411	56,891
Quebec	Manufacturing	10,324	10,859	10,378	11,144	11,602	10,611
	Services	15,407	16,351	17,846	18,750	21,687	23,101
	Total	25,731	27,210	28,222	29,894	33,289	33,712
United States [‡]	Manufacturing	467,653	472,154	530,834	494,913	476,165	518,113
	Services	1,038,952	1,068,952	1,137,074	1,052,554	1,079,539	1,155,227
	Total	1,506,605	1,561,106	1,667,908	1,547,466	1,555,705	1,673,340
		% change from previous year					
Region		2008 [†]	2009 [†]	2010	2011	2012 [†]	
Canada	Manufacturing	2.3	-0.8	0.8	4.2	-6.8	
	Services	5.4	2.6	4.7	15.7	5.8	
	Total	4.6	1.7	3.7	13.0	3.1	
British Columbia	Manufacturing	-5.0	-2.2	10.5	2.8	2.7	
	Services	3.2	-2.0	1.1	19.1	3.4	
	Total	2.3	-2.1	2.1	17.3	3.3	
Alberta	Manufacturing	-1.2	-5.0	-6.9	-2.2	20.0	
	Services	2.8	1.7	3.8	15.7	8.2	
	Total	2.6	1.3	3.2	14.7	8.7	
Manitoba	Manufacturing	-1.3	-3.5	9.8	-2.4	9.7	
	Services	4.6	3.9	4.9	7.8	1.2	
	Total	2.7	1.6	6.3	4.7	3.6	
Ontario	Manufacturing	0.3	2.1	-4.4	3.7	-11.1	
	Services	4.2	5.4	5.7	15.0	4.6	
	Total	3.0	4.5	2.8	12.0	0.9	
Quebec	Manufacturing	5.2	-4.5	7.4	4.1	-8.5	
	Services	6.1	9.1	5.1	15.7	6.5	
	Total	5.7	3.7	5.9	11.4	1.3	
United States	Manufacturing	1.0	12.4	-6.8	-3.8	8.8	
	Services	4.8	4.4	-7.4	2.6	7.0	
	Total	3.0	6.8	-7.2	0.5	7.6	

1. Figures for the United States were converted from U.S. dollar data using an average annual exchange rate.

[†] Revised

[‡] Preliminary

Source: BC Stats

TABLE 6. HIGH TECHNOLOGY GDP (CURRENT DOLLAR) FOR SELECTED U.S. STATES¹

	Cdn \$ million ²										
State	2001 ³	2002 ³	2003 ³	2004 ³	2005 ³	2006 ³	2007 ³	2008 ³	2009 ³	2010 ³	2011 ³
USA	1,496,809	1,585,987	1,448,975	1,488,037	1,448,821	1,481,423	1,506,605	1,341,197	1,467,968	1,347,468	1,593,704
California	284,519	283,182	257,215	261,685	267,601	259,404	260,620	267,049	286,508	265,559	272,751
Texas	113,130	120,290	102,710	106,924	109,425	112,657	107,837	111,116	114,591	106,661	107,739
New York	95,458	98,154	86,275	86,762	87,261	86,278	84,905	89,061	99,105	92,046	91,705
Florida	54,299	59,497	53,425	55,350	55,732	54,665	54,676	55,228	57,758	50,565	49,524
Virginia	52,700	55,658	51,108	52,849	51,931	49,448	48,461	49,422	55,037	51,343	50,753
Massachusetts	58,425	62,327	57,561	53,366	51,745	50,455	51,811	53,904	55,861	57,142	55,209
Washington	53,271	56,520	50,790	46,068	50,699	50,445	55,453	55,804	61,262	59,040	63,045
Pennsylvania	65,160	68,640	58,689	51,933	49,601	46,164	46,030	48,480	54,249	47,051	46,416
Illinois	49,318	52,484	46,888	47,260	46,527	44,702	44,029	44,421	47,545	45,372	43,686
New Jersey	64,370	64,411	59,406	57,122	54,317	56,333	57,495	58,324	60,987	54,490	54,195
Ohio	37,360	37,459	34,281	33,197	32,668	30,726	30,680	31,131	32,599	28,892	29,987
Maryland	31,163	33,155	32,663	33,169	33,296	32,867	34,091	36,961	41,490	39,693	39,854
North Carolina	41,218	46,729	43,789	37,280	38,775	44,554	43,691	44,900	51,478	47,087	47,910
Georgia	42,288	43,899	38,448	38,098	37,620	37,777	37,895	37,088	37,725	34,551	35,940
Michigan	34,620	36,963	32,708	28,196	26,323	24,154	24,077	23,780	23,915	22,121	22,178
Colorado	42,277	43,618	37,717	35,870	36,334	36,528	38,170	37,805	40,586	38,215	39,085
Minnesota	21,595	24,296	23,352	22,918	23,344	21,840	20,784	21,838	22,447	22,574	22,524
Arizona	34,101	33,968	32,701	26,836	24,761	24,371	23,020	23,362	22,865	22,113	22,014
Connecticut	28,970	28,128	25,288	25,045	24,923	25,895	25,627	26,965	24,609	25,749	25,566
Missouri	21,924	23,875	23,467	22,389	21,217	19,618	19,568	20,394	22,507	21,779	20,807
Other States	270,664	314,728	300,927	342,965	344,905	371,068	397,994	424,183	455,181	419,691	417,016
	% change from previous year										
State	2002 ³	2003 ³	2004 ³	2005 ³	2006 ³	2007 ³	2008 ³	2009 ³	2010 ³	2011 ³	
USA	6.0	-8.6	1.3	0.1	0.9	1.7	3.8	6.8	-7.3	8.5	
California	-0.5	-9.2	1.7	2.3	-3.1	0.5	2.5	7.3	-7.3	2.7	
Texas	6.3	-14.6	4.1	2.5	2.8	-4.5	3.1	2.8	-6.8	1.0	
New York	0.7	-10.3	0.6	0.6	1.1	-3.8	4.9	11.3	7.1	-0.4	
Florida	9.6	-10.2	3.6	0.7	-1.9	0.0	1.0	4.6	-12.5	-2.1	
Virginia	5.5	-8.2	3.4	-1.7	-4.8	-2.0	2.0	11.4	-6.7	-1.1	
Massachusetts	6.7	-7.6	-3.3	-5.0	-2.5	2.7	4.0	3.6	2.3	5.4	
Washington	6.1	-10.1	-5.4	5.5	-0.5	9.9	0.6	9.8	-6.0	6.8	
Pennsylvania	5.3	-14.5	-11.5	-4.5	-6.9	-0.3	5.3	11.9	-13.3	-1.4	
Illinois	6.4	-10.7	0.8	-2.0	-3.5	-1.5	0.9	7.0	-6.8	0.7	
New Jersey	0.1	-7.7	-9.9	-4.9	3.7	2.1	1.4	4.6	-10.6	-0.6	
Ohio	0.3	-8.5	-3.2	-1.6	-6.9	-0.4	1.7	4.1	-11.4	4.5	
Maryland	6.4	-1.5	1.4	0.6	-1.3	3.7	8.2	12.6	-4.0	0.6	
North Carolina	13.4	-6.3	-14.9	4.0	14.9	-1.9	2.8	14.6	-4.5	1.7	
Georgia	3.8	-12.4	-0.9	-1.3	-0.9	1.1	-1.7	1.8	-8.4	4.0	
Michigan	6.8	-12.9	-12.5	-6.6	-8.2	-0.3	-1.2	0.6	-7.5	0.3	
Colorado	3.2	-13.5	-4.9	1.3	0.5	4.5	-1.8	7.4	-6.8	2.3	
Minnesota	12.5	-5.9	-1.9	1.9	-6.4	-4.9	5.1	2.8	0.6	-0.2	
Arizona	-0.4	-5.7	-17.0	-7.7	-1.6	-5.5	1.5	-2.2	-5.3	-0.4	
Connecticut	-2.9	-10.1	2.2	-3.6	3.9	-1.6	5.2	-8.7	-5.5	-1.6	
Missouri	8.9	-1.7	-4.6	-5.2	-7.5	-0.3	4.2	10.4	-3.2	-4.5	
Other States	16.3	-4.4	14.0	0.6	7.6	7.3	6.6	7.3	-7.8	-0.6	

1. Top 20 states by employment in 2011.

2. Figures converted from U.S. dollar data using an average annual exchange rate.

³ Revised

⁴ Preliminary

Source: BC Stats

TABLE 7. BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR REVENUES

	\$ million										
INDUSTRY	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
Manufacturing	3,345	3,404	3,443	3,504	3,897	2,957	3,885	2,787	3,183	3,148	3,198
Services	18,726	19,783	19,947	19,400	18,964	17,090	18,949	18,393	18,047	18,381	18,053
Motion picture production & post production	482	644	442	704	767	750	805	519	484	592	611
Telecommunications	5,799	5,713	5,708	6,148	6,062	6,819	6,185	6,126	5,549	6,296	6,051
Engineering services	1,415	1,513	1,505	1,985	2,412	2,923	3,042	2,903	2,918	3,545	3,796
Software publishing	818	798	1,165	1,186	1,277	1,324	1,498	1,234	1,312	1,354	1,425
Other computer and related services	1,794	2,115	2,537	2,941	3,147	3,491	3,414	3,642	3,757	4,246	4,480
Other services	909	920	1,135	1,468	1,298	1,783	2,025	1,978	2,048	3,467	3,690
High Technology Sector Total	13,041	14,107	15,188	16,912	17,861	20,047	20,834	19,099	19,149	22,440	23,222
	% change from previous year										
INDUSTRY	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]	
Manufacturing	6.1	0.9	-3.2	15.7	2.1	8.3	-13.2	14.8	1.3	0.9	
Services	8.6	7.2	14.8	3.9	14.2	-6.7	-3.4	-2.0	20.1	3.9	
Motion picture production & post production	33.5	-31.4	59.4	8.9	-2.2	7.4	-35.5	-6.9	22.4	3.2	
Telecommunications	7.8	-0.1	7.7	-1.4	12.5	-9.3	-0.9	-9.4	13.5	-3.9	
Engineering services	6.9	3.4	26.7	21.7	21.1	4.1	-4.6	0.5	14.6	13.5	
Software publishing	-2.4	45.9	1.8	7.7	3.7	13.1	-16.3	7.2	3.2	5.3	
Other computer and related services	17.9	19.9	15.9	7.0	10.9	-2.2	6.7	3.1	13.0	5.5	
Other services	-5.0	25.1	27.8	-10.3	37.3	13.6	-2.3	3.5	69.3	6.4	
High Technology Sector Total	8.2	7.7	11.4	5.6	12.2	0.0	-4.8	0.4	17.1	3.5	

[†] Revised[†] Preliminary

Source: BC Stats and Statistics Canada

TABLE 8. HIGH TECHNOLOGY SECTOR REVENUES, BY PROVINCE AND THE UNITED STATES

	Cdn \$ million										
Region	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
Canada	145,804	145,493	153,335	160,426	170,466	183,906	195,733	196,612	201,621	225,885	233,908
British Columbia	13,041	14,107	15,188	16,912	17,861	20,047	20,834	19,099	19,169	22,440	23,222
Alberta	14,780	14,767	15,984	17,265	19,866	22,668	23,887	23,916	24,303	27,527	30,032
Manitoba	3,726	3,824	3,742	3,800	4,088	3,989	5,016	5,145	5,169	5,337	5,831
Ontario	64,854	62,719	67,700	70,004	74,006	78,901	83,582	86,797	87,073	96,347	98,046
Quebec	42,913	42,800	42,631	43,644	44,785	48,478	51,932	50,939	51,891	58,888	60,476
United States ¹	2,831,446	2,572,033	2,514,218	2,516,432	2,494,272	2,525,557	2,595,406	2,637,933	2,460,396	2,495,578	2,641,080
	% change from previous year										
Region	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]	
Canada	0.2	5.4	4.6	6.3	7.9	6.4	0.4	2.2	12.4	3.6	
British Columbia	8.2	7.7	11.4	5.6	12.2	0.0	-4.8	0.4	17.1	3.5	
Alberta	3.4	8.2	8.0	15.1	14.1	5.4	0.1	1.6	13.3	9.1	
Manitoba	18.5	-2.2	1.6	7.6	-2.4	25.8	2.6	0.5	7.1	5.3	
Ontario	-4.1	8.9	3.3	6.7	5.7	5.9	3.2	0.9	10.7	1.8	
Quebec	-0.3	-0.4	2.8	2.1	8.2	7.1	-1.9	1.9	13.5	2.7	
United States	-9.1	-2.3	0.1	-0.9	1.3	2.8	1.6	-6.5	1.2	5.8	

1. Figures for the United States were converted from U.S. dollar data using an average annual exchange rate.

[†] Revised[†] Preliminary

Source: BC Stats

TABLE 9. HIGH TECHNOLOGY SECTOR REVENUES FOR SELECTED U.S. STATES¹

	Cdn \$ million ²										
State	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 ³
USA	2,885,090	2,831,444	2,572,633	2,514,210	2,510,432	2,404,232	2,325,557	2,505,400	2,437,923	2,485,196	2,495,379
California	539,721	512,499	463,395	454,025	443,747	436,814	454,713	473,195	482,758	462,319	473,504
Texas	235,025	228,351	203,692	201,355	204,619	206,423	210,605	214,825	200,825	186,815	186,066
New York	105,303	100,334	107,514	105,877	108,251	109,304	140,598	152,711	108,595	156,468	156,212
Florida	109,872	109,724	101,811	102,644	101,102	97,682	99,910	101,236	102,800	95,895	95,367
Virginia	112,647	108,611	101,521	103,695	98,400	90,329	100,856	100,444	109,175	99,857	97,990
Massachusetts	115,289	115,270	104,830	103,703	97,417	90,232	101,301	105,438	101,095	99,598	98,241
Washington	102,865	108,228	101,399	86,452	102,512	107,700	104,631	108,938	114,459	102,095	106,911
Pennsylvania	119,514	118,881	105,727	99,748	97,964	91,250	87,583	93,295	96,765	82,722	80,955
Illinois	101,565	96,143	85,548	89,006	83,792	82,268	85,499	90,597	90,412	84,219	86,899
New Jersey	115,289	112,841	103,519	98,315	96,775	101,630	103,281	105,836	107,618	100,527	100,384
Ohio	80,066	73,535	65,191	62,818	64,114	62,170	63,913	64,812	65,612	60,221	60,572
Maryland	59,192	57,615	55,872	54,889	55,502	54,606	56,626	61,156	65,980	60,446	60,436
North Carolina	79,901	77,833	73,743	68,728	76,295	80,798	77,621	78,784	82,535	75,180	82,605
Georgia	82,882	85,044	74,375	73,759	74,323	71,236	72,239	73,256	75,703	72,395	74,043
Michigan	57,472	55,383	49,492	44,314	43,958	40,944	42,878	43,351	45,376	43,086	43,510
Colorado	65,826	70,087	63,243	57,500	60,060	62,263	64,187	65,288	69,640	65,073	64,962
Minnesota	49,199	48,942	44,509	42,263	43,843	41,877	39,027	41,016	39,861	38,742	38,453
Arizona	57,256	58,556	56,981	49,353	44,499	48,321	47,648	48,038	46,805	42,464	41,993
Connecticut	54,449	50,708	44,195	42,420	43,034	44,911	50,799	50,702	48,975	48,438	47,208
Missouri	43,580	40,880	45,021	45,270	41,280	38,277	38,116	38,070	40,126	36,627	36,030
Other States	538,547	530,992	481,273	490,124	494,931	484,117	477,466	479,444	480,843	452,206	465,038
State	% change from previous year ³										
USA	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 ³	
California	-5.0	-9.6	-2.0	-2.3	-1.6	4.1	4.1	2.0	-4.2	2.4	
Texas	-2.8	-10.8	-1.1	1.6	1.9	1.0	3.9	-6.2	-7.0	-0.4	
New York	-5.0	-8.0	-1.1	1.6	0.8	-1.9	4.2	9.1	-6.1	-0.2	
Florida	-0.1	-7.2	0.8	-1.5	-3.4	2.3	1.3	1.5	-6.7	-0.6	
Virginia	-3.6	-6.5	2.1	-5.1	-8.2	11.7	-0.4	8.7	-6.5	-1.9	
Massachusetts	0.0	-8.1	-1.1	-6.1	1.9	2.1	4.0	-4.1	-1.5	-3.4	
Washington	5.2	-6.3	-14.7	18.6	5.1	-2.9	6.1	5.1	-10.8	4.7	
Pennsylvania	-0.5	-11.1	-5.7	-1.8	-6.9	-4.0	6.5	3.7	-14.5	-2.1	
Illinois	-5.3	-11.2	4.3	-5.9	-1.8	3.9	6.0	0.2	-6.8	3.2	
New Jersey	2.2	-12.2	-5.0	-1.6	5.0	1.6	2.5	1.7	-6.6	-0.1	
Ohio	-8.2	-11.3	-3.6	2.1	-3.0	2.8	1.4	1.2	-8.2	0.6	
Maryland	-2.7	-3.0	-1.8	1.1	-1.6	3.7	8.0	7.9	-8.4	0.0	
North Carolina	-2.6	-5.3	-6.8	11.0	5.9	-3.9	1.5	4.8	-8.9	9.9	
Georgia	3.1	-12.5	-0.8	0.8	-4.2	1.4	1.4	3.4	-4.4	2.3	
Michigan	-3.6	-10.6	-10.5	0.8	-6.9	4.7	1.1	0.1	-0.7	1.0	
Colorado	6.5	-9.8	-9.1	4.5	3.7	3.1	1.7	6.7	-6.6	-0.2	
Minnesota	-0.5	-9.1	-5.0	3.7	-4.5	-6.8	5.1	-2.8	-2.8	-0.7	
Arizona	2.3	-2.7	-13.4	-9.8	8.6	-1.4	0.8	-2.6	-9.3	-1.1	
Connecticut	-6.9	-12.8	-4.0	1.4	4.4	13.1	-0.2	-3.4	-1.1	-2.5	
Missouri	7.5	-3.9	-4.0	-4.5	-7.3	-0.4	2.5	2.7	-8.7	-1.6	
Other States	-1.4	-9.4	1.8	1.0	-2.2	-1.4	0.4	1.5	-7.1	2.8	

1. Top 20 states by employment in 2011.

2. Figures converted from U.S. dollar data using an average annual exchange rate.

³ Revised⁴ Preliminary

* Source: BC Stats

TABLE 10. BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR EMPLOYMENT¹

INDUSTRY	2002 ²	2003 ²	2004 ²	2005 ²	2006 ²	2007 ²	2008 ²	2009 ²	2010	2011	2012 ²
Manufacturing Industries	13,990	13,540	13,190	12,830	14,650	15,670	15,140	13,530	13,910	13,630	13,330
Service Industries	52,540	53,380	54,150	56,970	64,370	69,590	71,810	70,820	69,690	71,940	70,740
Motion picture production & post-production	4,410	4,380	4,980	5,090	5,500	6,080	5,680	7,550	7,600	6,770	4,640
Telecommunications	11,140	11,020	11,120	10,960	10,910	11,040	10,870	10,820	10,310	10,540	10,300
Engineering services	9,300	10,200	10,270	12,450	13,180	13,910	15,200	13,930	12,920	14,430	15,640
Software publishing	4,070	4,730	5,480	7,090	7,390	8,160	8,490	8,040	7,650	7,220	7,660
Other computer and related services	15,070	16,690	15,670	16,310	17,540	18,270	19,170	18,570	19,830	21,390	20,660
Other services	8,560	8,470	8,620	8,270	9,840	12,220	12,400	11,900	11,390	11,640	11,840
High Technology Sector Total	66,530	68,920	69,340	73,800	79,020	85,260	86,960	83,360	82,660	84,190	84,070
BC Industrial Aggregate	1,617,540	1,651,070	1,692,090	1,751,320	1,825,660	1,896,890	1,942,620	1,891,190	1,895,220	1,925,020	1,967,670
% change from previous year											
INDUSTRY	2003 ²	2004 ²	2005 ²	2006 ²	2007 ²	2008 ²	2009 ²	2010	2011	2012 ²	
Manufacturing Industries	-3.2	-3.6	-3.7	14.2	6.6	-3.9	-17.3	3.8	-3.3	5.6	
Service Industries	5.4	1.4	6.6	9.9	9.1	3.2	-1.4	-1.4	3.7	-1.2	
Motion picture production & post-production	-2.8	16.2	18.2	-6.5	9.1	-5.4	32.9	0.7	-11.0	-31.5	
Telecommunications	-1.1	0.9	-1.4	-0.5	1.2	-1.5	-0.4	-4.7	0.3	-0.3	
Engineering services	9.7	8.7	21.3	5.8	5.5	9.3	-6.4	-7.3	11.7	8.4	
Software publishing	16.3	16.0	29.2	4.3	10.3	4.1	-5.3	-6.9	-5.5	6.1	
Other computer and related services	10.8	-6.1	4.1	7.6	4.1	4.9	-3.1	6.8	7.9	-4.4	
Other services	-1.1	1.9	-4.1	19.1	24.1	1.5	-4.0	-4.5	0.4	3.5	
High Technology Sector Total	3.6	0.6	6.4	7.1	7.8	2.9	-4.1	-0.9	1.9	-0.2	
BC Industrial Aggregate	2.1	2.5	3.5	4.2	3.9	2.7	-2.6	0.2	1.6	1.2	

1. Totals and percent changes are calculated using unrounded data.

¹ Revised

² Preliminary

Source: BC Stats and Statistics Canada

TABLE 11. BRITISH COLUMBIA EMPLOYMENT BY INDUSTRY¹

	Persons (thousands)										
	2002 ^r	2003 ^r	2004 ^r	2005 ^r	2006 ^r	2007 ^r	2008 ^r	2009 ^r	2010	2011	2012
Goods Producing Industries	283.2	282.6	292.0	302.7	318.2	328.9	328.7	290.8	287.6	299.7	305.6
Agriculture and Related	na	na	na	na	na	na	na	na	na	na	na
Fishing and Related	na	na	na	na	na	na	na	na	na	na	na
Forestry and Related	65.3	66.7	67.5	64.7	61.4	60.6	54.3	42.9	42.0	42.6	43.0
Logging and Forestry	17.0	17.1	17.8	16.5	15.0	14.7	12.4	9.5	10.5	11.1	11.2
Paper and Allied Products	11.6	13.6	13.2	12.3	12.2	11.9	10.7	8.7	7.6	7.3	7.8
Wood Manufacturing	36.7	36.0	36.5	35.9	34.2	33.9	31.1	24.8	23.8	24.3	24.0
Mining and Oil and Gas Extraction	10.7	11.1	11.8	13.3	14.8	16.2	18.3	15.1	15.7	18.8	22.1
Other Manufacturing	90.3	87.9	88.5	90.9	98.8	98.1	94.8	79.2	78.0	79.9	78.4
Construction	76.5	79.4	87.5	96.0	107.9	119.0	126.5	114.4	114.1	119.7	122.3
Utilities	7.4	7.9	7.9	9.2	9.3	8.9	9.2	10.0	9.3	9.4	9.5
Service Producing Industries	1,325.6	1,354.3	1,376.1	1,411.6	1,476.6	1,530.1	1,576.7	1,558.2	1,554.3	1,567.7	1,581.0
Retail and Wholesale Trade	293.7	307.0	314.6	324.1	336.6	350.1	357.4	343.6	337.7	340.3	340.6
Transportation and Warehousing	89.5	90.7	92.2	93.5	96.6	99.1	100.0	97.1	97.2	100.2	103.4
Information and Culture	36.9	37.2	37.5	40.6	41.8	44.7	43.3	44.0	43.5	43.1	40.5
Finance, Insurance and Real Estate	100.7	101.0	101.7	104.4	108.7	111.9	115.9	113.2	115.0	115.5	116.8
Professional, Scientific and Technical	77.9	79.8	80.5	82.7	89.5	95.4	101.6	97.3	96.4	99.5	102.8
Educational	126.3	124.7	126.8	129.0	134.7	138.5	139.1	137.9	136.2	139.0	142.0
Health and Social	183.5	189.4	185.0	186.7	195.4	200.1	205.5	212.3	216.5	220.5	222.1
Arts, Entertainment and Recreation	30.0	30.9	33.1	33.3	35.5	36.5	35.6	37.7	36.2	36.7	36.4
Accommodation, and Food	151.6	155.7	157.3	161.7	169.7	176.2	184.6	184.2	183.5	183.3	187.0
Public Administration	101.6	101.0	100.3	101.0	104.4	107.7	114.7	117.4	117.8	118.2	117.3
Other Services	134.0	136.8	147.0	154.7	163.9	170.0	181.0	173.4	174.3	171.5	172.1
BC Industrial Aggregate	1,617.5	1,651.1	1,692.0	1,751.3	1,825.6	1,890.9	1,942.6	1,891.2	1,895.2	1,925.0	1,947.7
High Technology Sector Total	66.5	68.9	69.3	73.8	79.0	85.2	87.0	83.4	82.6	84.2	84.1
% change from previous year											
	2003 ^r	2004 ^r	2005 ^r	2006 ^r	2007 ^r	2008 ^r	2009 ^r	2010	2011	2012	
Goods Producing Industries	-0.2	3.3	3.7	5.1	3.3	-0.1	-11.5	-1.1	4.2	2.0	
Agriculture and Related	na	na	na	na	na	na	na	na	na	na	
Fishing and Related	na	na	na	na	na	na	na	na	na	na	
Forestry and Related	2.1	1.2	-4.1	-5.1	-1.3	-10.4	-20.9	-2.1	1.4	0.9	
Logging and Forestry	0.5	3.9	-7.0	-9.5	-1.4	-15.8	-23.6	11.1	4.9	1.7	
Paper and Allied Products	17.4	-2.9	-7.2	-0.2	-2.5	-10.1	-19.2	-11.9	-4.5	6.7	
Wood Manufacturing	-2.0	1.4	-1.6	-4.8	-0.8	-8.3	-20.4	-3.7	1.7	-1.2	
Mining and Oil and Gas Extraction	3.6	6.7	12.3	11.6	9.6	12.6	-17.1	4.0	19.5	17.4	
Other Manufacturing	-2.7	0.6	2.7	8.7	-0.7	-3.4	-16.4	-1.5	2.4	-1.9	
Construction	3.8	10.2	9.8	12.3	10.3	6.3	-9.5	-0.3	4.9	2.2	
Utilities	5.5	1.1	15.5	1.9	-4.6	3.6	8.8	-7.8	1.9	0.1	
Service Producing Industries	2.2	1.6	2.6	4.6	3.6	3.2	-1.3	-0.2	0.9	0.8	
Retail and Wholesale Trade	4.6	2.5	3.0	3.9	4.0	2.1	-3.8	-1.7	0.8	0.1	
Transportation and Warehousing	1.3	1.7	1.4	3.3	2.6	0.9	-2.8	0.1	3.0	3.2	
Information and Culture	0.8	1.0	8.2	2.8	7.0	-2.9	1.5	-1.2	-0.9	-5.9	
Finance, Insurance and Real Estate	0.3	0.7	2.7	4.1	2.9	3.6	-2.3	1.5	0.5	1.1	
Professional, Scientific and Technical	2.4	0.9	2.8	8.2	6.6	6.5	-4.2	-0.8	3.1	3.4	
Educational	-1.3	1.7	1.7	4.4	2.8	0.4	-0.8	-1.3	2.1	2.2	
Health and Social	3.2	-2.3	0.9	4.7	2.4	2.7	3.3	2.0	1.8	0.7	
Arts, Entertainment and Recreation	3.0	7.1	0.5	6.8	2.8	-2.5	6.0	-4.2	1.6	-0.9	
Accommodation, and Food	2.7	1.0	2.7	5.0	3.9	4.8	-0.2	-0.4	-0.1	2.0	
Public Administration	-0.5	-0.7	0.6	3.4	3.2	6.5	2.4	0.3	0.3	-0.7	
Other Services	2.1	7.4	5.2	6.0	3.7	6.5	-4.2	0.5	-1.6	0.3	
BC Industrial Aggregate	2.1	2.5	3.5	4.2	3.6	2.7	-2.6	0.2	1.6	1.2	
High Technology Sector Total	3.6	0.6	6.4	7.1	7.8	2.0	-4.1	-0.9	1.9	-0.1	

1. Totals and percent changes are calculated using unrounded data.

r Revised

na: Data not available for specific industry.

Source: Statistics Canada and BC Stats

TABLE 12. HIGH TECHNOLOGY SECTOR EMPLOYMENT, BY PROVINCE

Province	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
Canada	711,700	692,170	695,850	716,750	749,520	771,060	782,720	766,620	762,630	769,080	789,600
British Columbia	66,530	68,920	69,340	73,800	79,020	85,210	86,950	83,350	82,600	84,190	84,070
Alberta	69,020	66,240	68,440	71,900	78,610	81,900	83,840	76,720	74,640	78,480	84,500
Manitoba	17,640	16,640	17,220	17,740	17,560	18,480	18,800	18,070	18,080	18,580	18,550
Ontario	303,370	289,710	287,760	293,580	308,290	317,670	322,660	320,430	314,580	313,130	324,090
Quebec	205,830	203,360	207,150	209,600	212,220	215,100	217,440	214,270	217,710	220,570	224,800
% change from previous year											
Province	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]	
Canada	-2.7	0.5	3.0	4.6	2.9	1.5	-2.1	-0.5	0.8	2.7	
British Columbia	3.6	0.6	6.4	7.1	7.8	2.0	-4.1	-0.9	1.9	-0.2	
Alberta	-4.0	3.3	5.1	9.3	4.2	2.4	-8.5	-2.7	5.1	7.7	
Manitoba	-5.7	3.5	3.0	-1.1	5.3	1.7	-3.8	0.0	2.8	-0.2	
Ontario	-4.5	-0.7	2.0	5.0	3.0	1.6	-0.7	-1.8	-0.5	3.5	
Quebec	-1.2	1.9	1.2	1.3	1.4	1.1	-1.5	1.6	1.3	1.9	

[†] Revised

[†] Preliminary

Source: BC Stats

TABLE 13. HIGH TECHNOLOGY SECTOR EMPLOYMENT FOR TOP 20 U.S. STATES

State	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
USA	7,932,870	7,534,790	7,516,820	7,645,050	7,846,410	7,982,090	8,097,080	7,747,570	7,669,330	7,822,540	7,968,800
California	1,377,600	1,297,780	1,314,420	1,334,620	1,373,260	1,386,730	1,405,020	1,335,250	1,331,720	1,362,140	1,399,730
Texas	593,170	565,650	556,190	570,540	590,400	609,420	624,320	592,050	584,180	602,910	623,560
New York	461,590	431,060	425,690	429,160	433,320	437,560	442,810	429,950	434,090	448,930	461,780
Florida	350,090	337,580	345,700	360,200	367,070	365,620	367,810	347,470	339,630	341,250	340,660
Virginia	285,130	278,250	291,980	302,410	312,510	317,860	324,440	320,980	319,900	321,970	320,970
Massachusetts	317,890	295,580	291,300	292,800	299,650	303,790	312,210	302,620	302,200	307,940	315,130
Washington	251,700	234,600	233,290	243,510	259,170	278,860	291,640	286,990	286,790	299,420	310,360
Pennsylvania	310,700	294,530	286,890	288,520	297,300	298,760	304,310	294,470	287,970	290,870	294,810
Illinois	305,480	284,970	277,130	278,510	281,820	283,350	286,870	271,520	266,260	270,950	276,750
New Jersey	292,620	275,790	270,760	271,930	281,230	287,040	281,090	264,470	256,890	254,360	251,380
North Carolina	205,690	195,620	193,400	202,720	206,330	212,300	215,170	207,740	205,340	213,170	219,430
Ohio	231,430	219,910	210,620	212,880	216,210	220,750	226,610	217,000	215,010	221,980	218,960
Georgia	221,190	216,370	211,400	211,550	214,450	218,170	217,940	210,150	208,910	211,040	217,920
Maryland	191,100	189,250	192,930	198,410	202,730	207,470	211,380	211,570	211,660	213,360	212,700
Michigan	234,510	224,940	216,690	216,610	214,170	211,910	207,960	187,130	191,530	200,720	211,510
Colorado	208,550	191,630	188,790	188,180	188,280	191,620	196,840	191,760	187,320	194,060	196,170
Minnesota	164,790	155,730	156,420	159,600	161,940	164,400	165,930	156,040	154,050	156,920	158,760
Arizona	153,520	145,380	146,350	148,420	154,750	155,130	155,060	146,310	143,590	148,390	151,120
Missouri	121,640	119,460	122,610	124,230	127,600	129,770	131,960	129,010	123,040	124,180	130,000
Connecticut	140,610	132,960	132,040	130,680	131,930	135,140	136,160	129,450	125,300	126,680	125,870
Other States	1,513,890	1,447,760	1,452,230	1,479,580	1,532,280	1,566,430	1,591,540	1,515,650	1,493,970	1,511,310	1,531,250
% change from previous year [†]											
State	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]	
USA	-5.0	-0.2	1.7	2.6	1.7	1.4	-4.3	-1.0	2.0	1.9	
California	-5.8	1.3	1.5	2.9	1.0	1.3	-5.0	-0.3	2.3	2.8	
Texas	-4.6	-1.7	2.6	3.5	3.2	2.4	-5.2	-1.3	3.2	3.4	
New York	-6.6	-1.2	0.8	1.0	1.0	1.2	-2.9	1.0	3.4	2.9	
Florida	-3.6	2.4	4.2	1.9	-0.4	0.6	-5.5	-2.3	0.5	-0.2	
Virginia	-2.4	4.9	3.6	3.3	1.7	2.1	-1.1	-0.3	0.6	-0.3	
Massachusetts	-7.0	-1.4	0.5	2.3	1.4	2.8	-3.1	-0.1	1.9	2.3	
Washington	6.8	0.6	4.4	6.4	7.6	4.6	1.6	0.1	4.4	3.7	
Pennsylvania	5.2	2.6	0.6	3.0	0.5	1.9	-3.2	2.2	1.0	1.4	
Illinois	6.7	2.8	0.5	1.2	0.5	1.2	5.4	1.9	1.8	2.1	
New Jersey	5.8	1.8	0.4	1.4	2.1	2.1	5.9	2.9	1.0	1.2	
North Carolina	4.9	1.1	4.8	1.8	2.9	1.4	3.5	1.2	3.8	2.9	
Ohio	5.0	4.2	1.1	1.6	2.1	2.7	4.2	0.9	3.2	1.4	
Georgia	2.2	2.3	0.1	1.4	1.7	0.1	-3.6	0.6	1.0	3.3	
Maryland	1.0	1.9	2.8	2.2	2.3	1.9	0.1	0.0	0.8	0.3	
Michigan	4.1	3.7	0.0	1.1	1.1	1.9	10.0	2.3	4.8	5.4	
Colorado	8.1	1.5	0.3	0.1	1.8	2.7	2.6	2.3	3.6	1.1	
Minnesota	5.5	0.4	2.0	1.5	1.5	0.9	-6.0	1.3	1.9	1.2	
Arizona	5.3	0.7	1.4	4.3	0.2	0.0	5.6	1.9	3.3	1.8	
Missouri	1.8	2.6	1.3	2.7	1.7	1.7	2.2	4.6	0.9	4.7	
Connecticut	5.4	0.7	1.0	1.0	2.4	0.8	-4.9	3.2	1.1	0.6	
Other States	-4.4	0.3	1.9	3.6	2.2	1.6	-4.8	-1.4	1.2	1.3	

1. Percent changes are calculated using unrounded data.

[†] Revised

[†] Preliminary

Source: BC Stats

TABLE 14. BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR WAGES AND SALARIES

	Value (\$ million)										
INDUSTRY	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
Manufacturing Industries	654.2	677.4	680.6	679.6	810.0	824.1	818.2	673.8	686.9	668.0	718.6
Service Industries	2,653.9	2,739.7	2,894.6	3,537.1	4,031.4	4,388.2	4,690.5	4,803.5	4,703.1	5,183.5	5,575.4
Motion picture production & post-production	156.0	167.1	150.0	215.7	206.9	225.0	258.9	156.8	146.1	177.9	140.4
Telecommunications	499.7	476.5	529.5	572.1	559.0	610.9	598.7	693.6	632.4	693.9	737.3
Engineering services	566.7	617.0	618.9	838.0	944.3	1,062.2	1,231.1	1,195.2	1,199.1	1,433.1	1,626.1
Software publishing	221.9	284.2	324.8	424.8	486.3	564.7	594.1	630.7	574.4	545.8	574.5
Other computer and related services	779.2	769.0	821.1	1,020.0	1,264.4	1,196.3	1,277.5	1,387.6	1,384.8	1,569.3	1,669.5
Other services	430.4	425.9	450.3	466.5	570.5	729.2	730.2	739.5	766.3	763.7	827.5
High Technology Sector Total	3,308.1	3,417.1	3,575.2	4,216.7	4,841.3	5,212.3	5,508.7	5,477.2	5,389.9	5,851.5	6,294.6
BC Industrial Aggregate	56,558.1	58,986.3	61,488.8	65,958.6	70,772.3	75,795.1	79,870.5	78,408.3	80,939.4	84,485.9	87,921.6
	% change from previous year										
INDUSTRY	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
Manufacturing Industries	3.5	0.5	-0.1	19.2	1.7	-0.7	-17.6	1.9	-2.8	7.6	
Service Industries	3.2	5.7	22.2	14.0	8.9	6.9	2.4	-2.1	10.2	7.6	
Motion picture production & post-production	7.1	-10.2	43.8	-4.1	8.7	15.1	-39.4	-6.8	21.8	-21.1	
Telecommunications	-4.6	11.1	8.0	-2.3	9.3	-2.0	15.9	-8.8	9.7	6.3	
Engineering services	8.9	0.3	35.4	12.7	12.5	15.9	-2.9	0.3	19.5	13.5	
Software publishing	28.1	14.3	30.8	14.5	16.1	5.2	6.2	-8.9	-5.0	5.3	
Other computer and related services	-1.3	6.8	24.2	24.0	-5.4	6.8	8.6	-0.2	13.3	6.4	
Other services	-1.0	5.7	3.6	22.3	27.8	0.1	1.3	3.6	-0.3	8.4	
High Technology Sector Total	3.3	4.6	17.9	14.8	7.7	5.7	-0.6	-1.6	8.6	7.6	
BC Industrial Aggregate	4.3	4.2	7.3	7.3	7.1	5.4	-1.8	3.2	4.4	4.1	

† Revised

‡ Preliminary

Source: BC Stats and Statistics Canada

TABLE 15. BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR AVERAGE WEEKLY EARNINGS¹

	Dollars per employee week (including overtime)										
INDUSTRY	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
Manufacturing Industries	900	960	990	1,020	1,060	1,010	1,040	1,030	1,020	1,020	1,030
Service Industries	970	950	990	1,110	1,200	1,210	1,250	1,300	1,290	1,390	1,510
Motion picture production & post-production	680	750	580	700	720	720	870	400	370	500	580
Telecommunications	860	830	910	1,000	980	1,060	1,060	1,230	1,180	1,290	1,370
Engineering services	1,170	1,160	1,160	1,290	1,370	1,460	1,550	1,650	1,780	1,900	1,990
Software publishing	1,050	1,150	1,140	1,150	1,260	1,330	1,340	1,500	1,440	1,450	1,440
Other computer and related services	990	880	1,000	1,200	1,380	1,260	1,280	1,430	1,340	1,410	1,550
Other services	960	960	1,000	1,080	1,110	1,140	1,130	1,190	1,290	1,280	1,340
High Technology Sector Total	950	950	990	1,100	1,170	1,170	1,210	1,260	1,250	1,330	1,440
BC Industrial Aggregate	670	690	700	720	740	770	790	800	820	840	870
	% change from previous year										
INDUSTRY	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
Manufacturing Industries	7.0	3.1	2.6	4.4	-4.5	2.4	-0.5	-1.0	-0.5	1.8	
Service Industries	-2.1	4.2	12.5	8.0	0.7	3.6	3.8	-0.5	7.3	8.8	
Motion picture production & post-production	10.2	-22.8	21.7	2.6	-0.3	21.6	-54.4	-7.5	36.8	15.2	
Telecommunications	-3.6	10.1	9.6	-1.8	8.0	-0.5	16.4	-4.3	9.4	6.6	
Engineering services	-0.7	-0.4	11.6	6.5	6.6	6.0	5.9	8.2	7.0	4.7	
Software publishing	10.1	-1.5	1.3	9.8	5.2	1.1	12.1	-4.2	0.6	-0.8	
Other computer and related services	-10.9	13.7	19.4	15.2	-9.1	1.8	12.1	-6.5	5.1	10.1	
Other services	0.0	3.8	8.0	2.7	3.0	-1.3	5.5	8.3	-0.8	4.6	
High Technology Sector Total	-0.3	4.0	10.0	7.2	-0.2	3.6	3.7	-0.7	6.5	7.7	
BC Industrial Aggregate	2.2	1.7	3.6	2.9	3.4	2.6	0.8	3.0	2.8	2.9	

1. Totals and percent changes are calculated using unrounded data.

† Revised

‡ Preliminary

Source: BC Stats and Statistics Canada

TABLE 16. HIGH TECHNOLOGY SECTOR AVERAGE WEEKLY EARNINGS, BY PROVINCE

AVERAGE WEEKLY EARNINGS, BY PROVINCE											
Province	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
Canada	950	980	1,040	1,050	1,130	1,180	1,210	1,240	1,270	1,350	1,380
British Columbia	950	950	990	1,100	1,170	1,170	1,210	1,260	1,250	1,330	1,440
Alberta	990	1,060	1,100	1,150	1,320	1,430	1,490	1,510	1,580	1,720	1,770
Manitoba	880	970	1,030	1,080	1,070	1,160	1,150	1,230	1,180	1,250	1,280
Ontario	1,020	1,040	1,130	1,110	1,190	1,230	1,280	1,310	1,360	1,440	1,440
Quebec	850	900	950	960	1,010	1,050	1,030	1,070	1,090	1,150	1,160
Province	% change from previous year										
	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
Canada	3.2	6.3	1.1	7.5	4.3	2.4	2.4	2.8	6.2	2.2	
British Columbia	-0.3	4.0	10.8	7.2	-0.2	3.6	3.7	-0.7	6.5	7.7	
Alberta	7.2	4.6	4.4	14.5	8.7	4.1	0.9	4.8	8.9	2.8	
Manitoba	9.7	6.1	5.4	-1.1	8.7	-1.2	6.7	-4.0	5.8	2.2	
Ontario	2.4	8.0	-1.8	8.0	2.6	4.6	2.1	4.3	5.5	0.0	
Quebec	5.2	6.1	0.5	5.8	4.0	-2.2	3.9	2.2	5.3	1.4	

[†] Revised

[†] Revised

[‡] Preliminary

Source: BC Stats

TABLE 17. HIGH TECHNOLOGY SECTOR WAGES AND SALARIES FOR SELECTED U.S. STATES¹

State	Value (\$Cdn million) ²										
USA	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
California	799,938	706,451	687,025	677,218	683,390	689,447	704,580	730,817	682,541	694,632	742,905
Texas	164,577	146,802	146,531	145,734	146,591	146,898	146,858	151,918	145,984	150,292	169,343
New York	60,018	52,095	50,293	50,401	52,458	52,842	54,674	55,693	51,363	52,940	56,747
Florida	47,324	40,934	39,472	38,570	38,143	38,769	39,808	41,595	39,479	40,708	43,818
Virginia	28,973	25,682	25,754	25,879	26,025	25,598	25,972	26,842	24,433	24,432	25,568
Massachusetts	30,749	28,140	28,951	29,447	29,536	29,702	30,910	33,693	31,529	31,457	32,188
Washington	37,520	32,735	31,851	30,715	30,981	31,833	32,920	34,108	33,371	33,649	35,942
Pennsylvania	33,026	28,134	23,365	24,001	25,511	27,013	28,615	30,641	28,782	30,352	33,124
Illinois	29,681	26,051	24,689	23,993	24,121	24,069	24,779	26,456	24,048	23,793	25,262
New Jersey	30,030	25,844	24,763	24,602	24,089	23,901	24,442	24,755	22,692	23,135	25,161
North Carolina	34,995	30,537	29,454	28,088	29,163	29,773	29,645	30,045	27,160	26,747	27,885
Ohio	18,950	16,704	16,228	16,332	16,248	16,697	17,061	18,066	16,906	17,320	18,431
Georgia	19,336	17,051	15,962	15,428	15,287	15,556	16,483	16,685	15,300	15,662	15,850
Maryland	21,476	19,266	18,142	17,751	17,791	17,916	17,923	18,555	17,089	17,383	18,542
Michigan	20,261	18,354	18,401	18,194	18,160	18,656	19,372	21,439	20,040	19,971	20,938
Colorado	23,157	20,902	19,354	18,487	17,575	17,118	17,120	15,611	14,579	15,340	16,499
Minnesota	22,639	19,539	18,308	17,787	17,845	17,860	18,263	19,152	17,586	17,914	18,788
Arizona	15,029	13,517	13,449	12,809	12,615	12,711	13,114	13,341	12,438	12,637	13,062
Missouri	14,418	12,624	12,438	12,385	12,798	12,513	12,745	13,135	12,119	12,574	13,256
Connecticut	10,595	9,875	9,898	9,743	9,857	9,814	10,223	11,008	9,749	9,677	10,566
Other States	15,251	13,277	12,965	12,450	12,237	12,435	12,704	13,122	11,953	12,055	12,572
	121,934	108,385	106,759	104,421	106,360	107,773	110,948	114,955	105,942	106,594	109,362
% change from previous year											
State	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
USA	-11.7	-2.7	-1.4	0.9	0.9	2.2	3.7	-6.6	1.8	6.9	
California	-10.8	-0.2	-0.5	0.6	0.2	0.0	3.4	-3.9	3.0	12.7	
Texas	-13.2	-3.5	0.2	4.1	0.7	3.5	1.9	-7.8	3.1	7.2	
New York	-13.5	-3.6	-2.3	-1.1	1.6	2.7	4.5	-5.1	3.1	7.6	
Florida	-11.4	0.3	0.5	0.6	-1.6	1.5	3.3	-9.0	0.0	4.6	
Virginia	-8.5	2.9	1.7	0.3	0.6	4.1	9.0	-6.4	-0.2	2.3	
Massachusetts	-12.8	-2.7	-3.6	0.9	2.8	3.4	3.6	-2.2	0.8	6.8	
Washington	-14.8	-17.0	2.7	6.3	5.9	5.9	7.1	-6.1	5.5	9.1	
Pennsylvania	-12.2	-5.2	-2.8	0.5	-0.2	3.0	6.8	-9.1	-1.1	6.2	
Illinois	-13.9	-4.2	-0.6	-2.1	-0.8	2.3	1.3	-9.3	2.0	8.8	
New Jersey	-12.7	-3.5	-4.6	3.8	2.1	-0.4	1.3	-9.6	-1.5	4.3	
North Carolina	-11.9	-2.8	0.6	-0.5	2.8	2.2	5.9	-6.4	2.4	6.4	
Ohio	-11.8	-6.4	-3.3	-0.9	1.8	6.0	1.2	-8.3	2.4	1.2	
Georgia	-10.3	-5.8	-2.2	0.2	0.7	0.0	3.5	-7.9	1.7	6.7	
Maryland	-9.4	0.3	-1.1	-0.2	2.7	3.8	10.7	-6.5	-0.3	4.8	
Michigan	-9.7	-7.4	-4.5	-4.9	-2.6	0.0	-8.8	-6.6	5.2	7.6	
Colorado	-13.7	-6.3	-2.8	0.3	0.1	2.3	4.9	-8.2	1.9	4.9	
Minnesota	-10.1	-0.5	-4.8	-1.5	0.8	3.2	1.7	-6.8	1.6	3.4	
Arizona	-12.4	-1.5	-0.4	3.3	-2.2	1.9	3.1	-7.7	3.8	5.4	
Missouri	-6.8	0.2	-1.6	1.2	-0.4	4.2	7.7	-11.4	-0.7	9.2	
Connecticut	-12.9	-2.4	-4.0	-1.7	1.6	2.2	3.3	-8.9	0.9	4.3	
Other States	-11.1	-1.5	-2.2	1.9	1.3	2.9	3.6	-7.8	0.6	2.6	

1. Top 20 states by employment.

1. Top 20 states by employment.

2. Figures converted from U.S. dollar data using an average annual exchange rate.

[†] Revised

[‡] Preliminary

Source: BC Stats

TABLE 18. HIGH TECHNOLOGY SECTOR AVERAGE WEEKLY EARNINGS FOR SELECTED U.S. STATES¹

	Value (\$Cdn) ²										
State	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
USA	1,935	1,798	1,753	1,698	1,671	1,656	1,669	1,809	1,767	1,703	1,788
California	2,291	2,169	2,138	2,095	2,047	2,032	2,005	2,181	2,102	2,116	2,321
Texas	1,941	1,767	1,735	1,695	1,704	1,663	1,680	1,804	1,686	1,684	1,745
New York	1,966	1,821	1,779	1,724	1,688	1,699	1,724	1,855	1,744	1,739	1,820
Florida	1,588	1,458	1,429	1,377	1,360	1,343	1,354	1,482	1,379	1,373	1,439
Virginia	2,068	1,939	1,901	1,868	1,813	1,793	1,827	2,014	1,890	1,874	1,924
Massachusetts	2,263	2,124	2,096	2,012	1,983	2,010	2,022	2,162	2,118	2,095	2,188
Washington	2,516	2,300	1,921	1,890	1,888	1,858	1,881	2,048	1,924	1,944	2,047
Pennsylvania	1,833	1,697	1,650	1,594	1,556	1,544	1,561	1,723	1,602	1,569	1,643
Illinois	1,886	1,739	1,714	1,694	1,639	1,618	1,634	1,749	1,635	1,637	1,744
New Jersey	2,294	2,124	2,086	1,981	1,989	1,989	2,022	2,179	2,027	2,017	2,128
North Carolina	1,767	1,638	1,610	1,545	1,510	1,508	1,521	1,668	1,579	1,558	1,611
Ohio	1,602	1,486	1,454	1,389	1,356	1,351	1,395	1,475	1,365	1,353	1,388
Georgia	1,862	1,708	1,646	1,609	1,591	1,575	1,577	1,693	1,569	1,580	1,632
Maryland	2,034	1,861	1,830	1,759	1,717	1,725	1,757	1,943	1,816	1,796	1,888
Michigan	1,894	1,782	1,712	1,637	1,573	1,549	1,579	1,600	1,460	1,466	1,496
Colorado	2,082	1,956	1,860	1,812	1,817	1,787	1,780	1,915	1,801	1,771	1,837
Minnesota	1,749	1,664	1,649	1,540	1,494	1,483	1,515	1,639	1,548	1,544	1,578
Arizona	1,801	1,666	1,631	1,600	1,586	1,547	1,576	1,721	1,618	1,625	1,682
Missouri	1,671	1,585	1,549	1,505	1,481	1,450	1,485	1,636	1,519	1,495	1,559
Connecticut	2,081	1,915	1,883	1,827	1,779	1,765	1,790	1,944	1,829	1,825	1,916
% change from previous year											
State	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
USA	-7.1	-2.5	-3.1	-1.6	-0.9	0.8	8.4	-5.7	-0.3	5.0	
California	-5.3	-1.4	-2.0	-2.2	-0.8	-1.3	8.8	-3.6	0.6	9.7	
Texas	-9.0	-1.8	-2.3	0.5	-2.4	1.0	7.4	-6.5	-0.2	3.6	
New York	-7.4	-2.3	-3.1	-2.1	0.7	1.5	7.6	-6.0	-0.3	4.6	
Florida	-8.1	-2.0	-3.6	-1.3	-1.3	0.9	9.4	-6.9	-0.5	4.8	
Virginia	-6.2	-2.0	-1.7	-3.0	-1.1	1.9	10.2	-6.1	-0.9	2.7	
Massachusetts	-6.1	-1.3	-4.0	-1.5	1.3	0.6	6.9	-2.0	-1.1	4.4	
Washington	-8.6	-16.5	-1.6	-0.1	-1.6	1.2	8.9	-6.0	1.0	5.3	
Pennsylvania	-7.4	-2.7	-3.4	-2.4	-0.8	1.1	10.3	-7.0	-2.1	4.7	
Illinois	-7.8	-1.4	-1.2	-3.2	-1.3	1.0	7.0	-6.5	0.1	6.5	
New Jersey	-7.4	-1.8	-5.0	0.4	0.0	1.7	7.8	-7.0	-0.5	5.5	
North Carolina	-7.3	-1.7	-4.0	-2.2	-0.1	0.8	9.7	-5.3	-1.3	3.4	
Ohio	-7.2	-2.2	-4.4	-2.4	-0.3	3.2	5.7	-7.5	-0.8	2.6	
Georgia	-8.3	-3.6	-2.3	-1.1	-1.1	0.2	7.3	-7.3	0.7	3.3	
Maryland	-8.5	-1.7	-3.9	-2.4	0.4	1.9	10.5	-6.5	-1.1	5.1	
Michigan	-5.9	-3.9	-4.4	-3.9	-1.6	2.0	1.3	-8.8	0.4	2.0	
Colorado	-6.1	-4.9	-2.5	0.3	-1.7	-0.4	7.6	-6.0	-1.7	3.7	
Minnesota	-4.9	-0.9	-6.6	-3.0	-0.7	2.2	8.2	-5.6	-0.3	2.2	
Arizona	-7.5	-2.1	-1.9	-0.9	-2.5	1.9	9.2	-6.0	0.4	3.5	
Missouri	-5.2	-2.3	-2.8	-1.5	-2.1	2.4	10.1	-7.1	-1.6	4.3	
Connecticut	-8.0	-1.7	-3.0	-2.6	-0.8	1.4	8.6	-5.9	-0.2	5.0	

1. Top 20 states by employment.

2. Figures converted from U.S. dollar data using an average annual exchange rate.

[†] Revised

[‡] Preliminary

Source: BC Stats

TABLE 19. HIGH TECHNOLOGY SECTOR BUSINESS COUNTS,¹ BY DEVELOPMENT REGION AND REGIONAL DISTRICT

Development Region Regional District	2009			2010			2011			2012		
	Mfg	Service	Total	Mfg	Service	Total	Mfg	Service	Total	Mfg	Service	Total
Vancouver Island/Coast	99	1,380	1,479	97	1,366	1,463	102	1,330	1,432	102	1,338	1,440
23 Alberni-Clayoquot	2	36	38	2	32	34	2	31	33	2	31	33
17 Capital	56	856	912	55	842	897	57	826	883	57	827	884
45 Central Coast	0	4	4	0	4	4	0	3	3	0	5	5
25 Comox-Strathcona	16	139	155	15	144	159	17	135	152	14	133	147
19 Cowichan Valley	11	82	93	10	90	100	10	97	107	9	104	113
43 Mount Waddington	0	12	12	0	13	13	0	12	12	0	10	10
21 Nanaimo	12	222	234	15	225	240	16	211	227	19	211	230
27 Powell River	2	29	31	0	16	16	0	15	15	1	17	18
Mainland/Southwest	529	5,488	6,017	509	5,520	6,029	483	5,426	5,909	508	5,586	6,094
09 Fraser Valley	27	210	237	26	223	249	29	214	243	26	212	238
15 Greater Vancouver	498	5,182	5,680	476	5,184	5,660	449	5,098	5,547	475	5,264	5,739
31 Squamish-Lillooet	2	61	63	3	61	64	1	59	60	3	56	59
29 Sunshine Coast	2	35	37	4	52	56	4	55	59	4	54	58
Thompson/Okanagan	80	667	747	77	661	738	76	657	733	70	709	779
35 Central Okanagan	43	254	297	39	255	294	38	258	296	34	287	321
39 Columbia-Shuswap	4	69	73	4	59	63	4	64	68	5	63	68
37 North Okanagan	11	100	111	11	98	109	12	102	114	12	111	123
07 Okanagan-Similkameen	9	84	93	8	77	85	9	71	80	7	80	87
33 Thompson-Nicola	13	160	173	15	172	187	13	162	175	12	168	180
Kootenay	12	186	198	12	189	201	14	190	204	12	197	209
03 Central Kootenay	5	93	98	5	89	94	6	85	91	6	88	94
01 East Kootenay	3	69	72	3	75	78	3	76	79	3	79	82
05 Kootenay Boundary	4	24	28	4	25	29	5	29	34	3	30	33
Cariboo	19	146	165	18	139	157	17	148	165	18	142	160
41 Cariboo	6	58	64	5	55	60	4	62	66	6	59	65
53 Fraser-Fort George	13	88	101	13	84	97	13	86	99	12	83	95
North Coast	1	55	56	0	57	57	0	58	58	1	64	65
49 Kitimat-Stikine	1	37	38	0	38	38	0	37	37	0	42	42
47 Skeena-Queen Charlotte	0	18	18	0	19	19	0	21	21	1	22	23
Nechako	1	42	43	0	44	44	2	42	44	1	42	43
51 Bulkley-Nechako	1	40	41	0	42	42	2	40	42	1	40	41
57 Stikine	0	2	2	0	2	2	0	2	2	0	2	2
Northeast	8	181	189	7	182	189	7	184	191	7	203	210
55 Peace River	8	180	188	5	170	175	5	171	176	4	186	190
59 Northern Rockies	0	1	1	2	12	14	2	13	15	3	17	20
Total²	751	8,152	8,903	722	8,163	8,885	702	8,055	8,757	719	8,291	9,010

1. Businesses with zero employees are not included in these figures.

2. Figures do not add to totals because some establishments did not have geographic codes.

Source: BC Stats

TABLE 20. BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR BUSINESS COUNTS,¹ BY INDUSTRY

Industry	2007	2008	2009	2010	2011	2012
Manufacturing Industries	779	772	751	732	702	719
Chemicals and Pharmaceuticals	60	54	52	48	45	45
Computer and Electronic Products	247	243	231	221	211	223
Aerospace	43	39	39	34	33	39
Medical Equipment	304	308	308	300	294	290
Other Manufacturing	125	128	121	119	119	122
Service Industries	7,865	8,060	8,152	8,163	8,055	8,291
Motion picture production & post production	825	826	771	770	775	781
Telecommunications	284	293	287	282	261	280
Engineering services	1,810	1,796	1,761	1,760	1,718	1,775
Computer and related services	3,060	3,181	3,271	3,298	3,246	3,331
Other services	1,886	1,964	2,062	2,053	2,055	2,124
High Technology Sector	8,644	8,832	8,903	8,885	8,757	9,010
% change from previous year						
Industry	2008	2009	2010	2011	2012	
Manufacturing Industries	-0.9	-2.7	-3.9	-2.8	2.4	
Chemicals and Pharmaceuticals	-10.0	-3.7	-7.7	-6.3	0.0	
Computer and Electronic Products	-1.6	-4.9	-4.3	-4.5	5.7	
Aerospace	-9.3	0.0	-12.8	-2.9	18.2	
Medical Equipment	1.3	0.0	-2.6	-2.0	-1.4	
Other Manufacturing	2.4	-5.5	-1.7	0.0	2.5	
Service Industries	2.5	1.1	0.1	-1.3	2.9	
Motion picture production & post production	0.1	-6.7	-0.1	0.6	0.8	
Telecommunications	3.2	-2.0	-1.7	-7.4	7.3	
Engineering services	-0.8	-1.9	-0.1	-2.4	3.3	
Computer and related services	4.0	2.8	0.8	-1.6	2.6	
Other services	4.1	5.0	-0.4	0.1	3.4	
High Technology Sector	2.2	0.8	-0.2	-1.4	2.9	

1. Businesses with zero employees are not included in these figures.

Source: BC Stats and Statistics Canada

TABLE 21. BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR BUSINESS COUNTS, BY INDUSTRY AND BUSINESS SIZE, 2012

Industry	Number of businesses, by number of employees										None ¹	Total
	1-4	5-9	10-19	20-49	50-99	100-199	200-499	500-999	1,000-1,499	1,500 Plus		
Manufacturing Industries	341	138	87	78	41	19	14	0	1	0	719	1,389
Chemicals and Pharmaceuticals	14	8	4	9	6	1	3	0	0	0	45	76
Computer and Electronic Products	85	35	33	34	20	11	4	0	1	0	223	503
Aerospace	16	9	4	3	2	2	3	0	0	0	36	106
Medical Equipment	174	63	26	17	7	2	1	0	0	0	290	442
Other Manufacturing	52	23	20	15	6	3	3	0	0	0	122	262
Service Industries	5,913	1,008	631	423	180	94	28	4	4	6	8,291	38,657
Motion picture production & post production	636	67	40	16	13	5	4	0	0	0	781	5,208
Telecommunications	146	60	30	25	10	4	0	0	3	2	280	920
Engineering services	1,208	213	154	113	62	21	4	0	0	0	1,775	5,577
Computer and related services	2,429	392	230	160	61	36	16	3	1	3	3,331	16,858
Other services	1,494	276	177	109	34	28	4	1	0	1	2,124	10,094
Total for sector	6,254	1,146	718	501	221	113	42	4	5	6	9,010	40,046
Total for all Industries	99,501	35,148	21,209	13,204	4,131	1,735	731	159	55	77	175,950	709,047

1. Businesses in this category do not maintain an employee payroll, but may have a workforce consisting of contracted workers or family members. Note that there have been methodological changes to Statistics Canada's *Business Register*—the source of business count data—which have resulted in a substantial increase in the number of businesses with no employees. Figures from earlier editions of the *Profile* report should not be compared with those presented here.

Source: BC Stats and Statistics Canada

TABLE 22. HIGH TECHNOLOGY SECTOR BUSINESS COUNTS,¹ BY PROVINCE AND INDUSTRY, 2012

Industry	BC	Alberta	Manitoba	Ontario	Quebec	Canada
Manufacturing Industries	719	552	128	2,092	1,194	4,939
Chemicals and Pharmaceuticals	45	32	10	149	122	383
Computer and Electronic Products	223	172	29	880	397	1,758
Aerospace	39	23	13	113	75	282
Medical Equipment	290	227	51	541	361	1,580
Other Manufacturing	122	98	25	409	239	936
Service Industries	8,291	11,882	876	24,173	10,533	59,023
Motion picture production & post production	781	146	75	1,503	971	3,623
Telecommunications	280	190	49	810	448	1,944
Engineering services	1,775	3,516	155	3,365	1,711	11,369
Computer and related services	3,331	3,362	368	14,893	5,314	28,208
Other services	2,124	4,666	229	3,602	2,089	13,879
Total for sector	9,010	12,434	1,004	26,265	11,727	63,962
Total for all industries	175,951	157,885	37,426	397,870	241,973	1,136,072

1. Businesses with zero employees are not included in these figures.

Source: BC Stats and Statistics Canada

TABLE 23. SHIPMENTS AND EXPORTS OF BRITISH COLUMBIA HIGH TECHNOLOGY GOODS AND TOTAL PROCESSED GOODS

	Value (\$000,000)										
	2002	2003 ¹	2004	2005	2006	2007	2008 ²	2009 ²	2010	2011	2012 ²
High Technology Goods											
Total Shipments ¹	2,265	2,404	2,642	2,504	2,897	2,957	3,085	2,707	3,102	3,140	3,168
Exports	685	635	687	705	857	869	979	857	873	900	994
Exports as % of Shipments	30.2	26.4	26.0	28.2	29.6	29.4	31.7	31.7	28.1	28.7	31.4
Total Processed Goods											
Total Shipments ¹	38,610	39,772	41,607	42,883	44,480	42,418	39,435	32,798	35,542	37,859	38,319
Exports of Processed Goods ²	22,534	20,880	23,572	22,579	22,776	21,801	19,647	15,545	17,354	18,895	19,277
Export Orientation (%)	58.4	52.5	56.7	52.7	51.2	51.4	49.8	47.4	48.8	49.9	50.3

	% change from previous year										
	2002	2003 ¹	2004	2005	2006	2007	2008 ²	2009 ²	2010	2011	2012 ²
High Technology Goods											
Total Shipments	-11.0	6.1	9.9	-5.2	15.7	2.1	4.3	-12.2	14.6	1.2	0.9
Exports	-8.5	-7.2	8.1	2.7	21.5	1.4	12.7	-12.4	1.8	3.1	10.5
Total Processed Goods											
Total Shipments	0.8	3.0	4.6	3.1	3.7	-4.6	-7.0	-16.8	8.4	6.5	1.2
Exports of Processed Goods	-1.5	-7.3	12.9	-4.2	0.9	-4.3	-9.9	-20.9	11.6	8.9	2.0

1. Total shipments represent revenues from all production, sales, services and related activities in the manufacturing sector.

2. "Processed goods" excludes selected agricultural, fish, logging, mining and energy products not produced by B.C. manufacturing industries.

¹ Revised

² Preliminary

Source: BC Stats and Statistics Canada

TABLE 24. B.C. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS, BY DESTINATION AND MODE OF TRANSPORT

Value (\$ million) ¹												
Destination	Mode of Transport ²	2002	2003 ¹	2004	2005	2006	2007	2008 ¹	2009 ¹	2010	2011	2012 ^P
United States	Land	384.2	357.5	352.0	330.8	402.0	430.3	436.7	397.8	347.0	358.9	384.4
	Sea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
	Air	173.9	149.2	157.2	156.3	185.5	167.5	177.2	183.2	186.5	177.8	224.0
	Total	558.1	506.7	509.3	487.1	587.5	597.8	613.9	581.0	533.5	536.8	608.4
Pacific Rim (total)	Land	7.5	4.4	1.5	0.6	0.2	8.1	1.9	0.5	0.6	0.2	9.1
	Sea	13.7	2.2	3.4	11.3	5.4	3.3	7.8	7.6	9.5	6.0	15.6
	Air	25.9	35.7	61.3	85.6	88.1	61.9	90.9	75.5	95.1	94.3	96.5
	Total	47.2	42.3	66.3	97.4	93.7	73.3	100.5	83.6	105.2	100.5	121.3
Japan	Land	4.5	1.7	0.3	0.3	0.2	5.2	0.0	0.0	0.0	0.0	3.3
	Sea	12.1	0.1	0.3	0.1	0.8	0.5	1.3	0.6	0.2	0.7	7.8
	Air	5.4	5.5	10.4	19.6	18.7	10.4	21.9	10.5	9.5	9.8	12.6
	Total	22.0	7.3	11.1	20.0	19.7	16.1	23.3	11.1	9.7	10.5	23.7
Pacific Rim (excluding Japan)	Land	3.1	2.7	1.2	0.3	0.0	2.9	1.8	0.4	0.6	0.2	5.8
	Sea	1.6	2.1	3.1	11.2	4.6	2.8	6.4	7.0	9.3	5.3	7.8
	Air	20.5	30.2	50.9	66.0	69.3	51.4	69.0	65.1	85.6	84.6	84.0
	Total	25.1	35.0	55.2	77.4	74.0	57.2	77.3	72.5	95.5	90.0	97.6
European Union	Land	0.5	0.3	5.2	0.5	0.4	1.0	0.5	1.2	1.1	0.3	0.2
	Sea	5.3	7.9	8.3	2.1	3.5	15.7	82.5	21.2	8.4	10.4	9.8
	Air	52.5	43.3	52.2	67.7	102.6	110.0	105.3	101.4	135.3	136.6	134.9
	Total	58.3	51.5	65.7	70.3	106.6	126.7	188.2	123.9	144.8	147.3	145.0
All Other Countries	Land	1.6	1.3	2.3	0.7	5.2	4.7	4.8	3.1	1.5	1.5	4.8
	Sea	1.9	2.3	2.9	2.0	2.7	4.3	5.1	1.9	10.5	20.6	19.8
	Air	17.5	31.1	40.2	47.7	61.0	61.8	66.1	63.6	77.3	93.2	95.1
	Total	21.0	34.7	45.4	50.3	68.8	70.9	76.0	68.6	89.4	115.2	119.7
Total	Land	393.8	363.6	361.0	332.5	407.7	444.2	443.8	402.7	350.2	360.8	398.6
	Sea	20.9	12.4	14.7	15.3	11.6	23.4	95.4	30.6	28.4	37.2	45.3
	Air	269.9	259.3	311.0	357.3	437.2	401.2	439.5	423.8	494.2	501.9	550.5
	Total	684.6	635.2	686.6	705.1	856.5	868.8	978.7	857.1	872.8	899.9	994.3
% of Exports to Destination ³												
Destination	Mode of Transport	2002	2003 ¹	2004	2005	2006	2007	2008 ¹	2009 ¹	2010	2011	2012 ^P
United States	Land	68.8	70.5	69.1	67.9	68.4	72.0	71.1	68.5	65.0	66.9	63.2
	Sea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Air	31.2	29.5	30.9	32.1	31.6	28.0	28.9	31.5	34.9	33.1	36.8
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Pacific Rim (total)	Land	16.0	10.4	2.3	0.6	0.2	11.1	1.9	0.6	0.6	0.2	7.5
	Sea	29.1	5.2	5.2	11.6	5.8	4.6	7.8	9.1	9.0	6.0	12.9
	Air	54.9	84.4	92.5	87.9	94.0	84.4	90.4	90.4	90.4	93.8	79.6
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Japan	Land	20.3	23.7	2.8	1.5	0.8	32.0	0.2	0.3	0.2	0.3	13.9
	Sea	55.1	1.5	2.7	0.3	4.0	3.3	5.8	5.1	2.3	6.6	33.1
	Air	24.6	74.7	94.4	98.2	95.2	64.6	94.0	94.6	97.5	93.0	53.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Pacific Rim (excluding Japan)	Land	12.2	7.6	2.2	0.3	0.0	5.1	2.4	0.6	0.6	0.2	6.0
	Sea	6.4	5.9	5.6	14.5	6.2	4.9	8.3	9.7	9.7	5.9	8.0
	Air	81.5	86.5	92.2	85.2	93.7	89.9	89.3	89.7	89.7	93.9	86.1
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
European Union	Land	0.8	0.7	7.9	0.7	0.4	0.8	0.2	1.0	0.8	0.2	0.2
	Sea	9.1	15.3	12.7	3.0	3.3	12.4	43.8	17.1	5.8	7.1	6.8
	Air	90.2	84.1	79.4	96.3	96.3	86.8	55.9	81.9	93.5	92.7	93.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Other Countries	Land	7.7	3.9	5.0	1.3	7.5	6.7	6.3	4.6	1.7	1.3	4.0
	Sea	8.8	6.7	6.3	3.9	3.9	6.1	6.7	2.7	11.8	17.8	16.5
	Air	83.5	89.4	88.7	94.8	88.6	87.2	87.0	92.7	86.5	80.9	79.5
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	Land	57.5	57.2	52.6	47.2	47.6	51.1	45.3	47.0	40.1	40.1	40.1
	Sea	3.0	1.9	2.1	2.2	1.4	2.7	9.7	3.6	3.3	4.1	4.6
	Air	39.4	40.8	45.3	50.7	51.0	46.2	44.9	49.4	56.6	55.8	55.4
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1. Totals may not equal the sum of Land, Sea and Air due to the fact that some respondents did not fill in the survey completely.

2. Shipments by land to overseas markets represent the export of B.C. produced high technology products transhipped through U.S. Ports such as Seattle or Portland.

3. Percentages may not add to 100 due to rounding.

¹ Revised

^P Preliminary

Source: BC Stats

TABLE 25. TOP 25 BRITISH COLUMBIA HIGH TECHNOLOGY EXPORT COMMODITIES, 2012^a

HS Code	Commodity Description ¹	Value (\$000,000)	% Total Exports
88033000	Aircraft parts nes	159.7	16.1
90328900	Automatic regulating or controlling instruments and apparatus, nes	86.7	8.7
85258020	Digital cameras	82.9	8.3
85258010	Television cameras	61.6	6.2
90189000	Instruments and appliances used in medical or veterinary sciences, nes	44.8	4.5
84715000	Process units, o/t 8471.41/.49, w/n cntg in same housing storage, input, output units	41.2	4.1
90213900	Artificial parts of the body, nes	33.2	3.3
84714100	Other adpm, with at least cpu, input and output units, o/t portable	33.0	3.3
88023000	Aircraft nes of an unladen weight > 2,000 kg but not exceeding 15,000 kg	31.4	3.2
90181200	Ultrasonic scanning apparatus	27.2	2.7
84733000	Parts and accessories of automatic data processing machines & units thereof	24.7	2.5
84119100	Parts of turbo-jets or turbo-propellers	24.6	2.5
90158000	Surveying, hydrographic, oceanographic, meteorological or geophysical inst nes	24.5	2.5
85431000	Particle accelerators, nes	20.5	2.1
90304000	Instruments and apparatus, specially designed for telecommunications nes	16.4	1.6
88032000	Aircraft under-carriages and parts thereof	15.9	1.6
85176190	Base stations, nes	15.0	1.5
85177000	Parts, of TV sets, incl for cell/wireless networks, oth app for trans/recep of voice/img/data	14.9	1.5
84714900	Other digital automatic data processing machines, presented in the form of systems	13.6	1.4
85176211	Telephonic or telegraphic switching apparatus	12.7	1.3
84705000	Cash registers	10.7	1.1
90221400	Apparatus based on the use of X-rays for medical, surgical, or vet uses, nes	10.3	1.0
90319000	Parts and accessories for measuring or checking inst, appl and machines, nes	9.6	1.0
85256000	Transmission apparatus, for radio-broadcasting/tv, incorporating reception apparatus	9.6	1.0
28444019	Radioactive elements & isotopes and compounds, nes	9.6	1.0
Subtotal		834.3	83.9
	All Other High Technology Commodities	160.0	16.1
Total		994.3	100.0

HS code = Harmonized System commodity code; nes = Not Elsewhere Specified

1. Commodity descriptions are drawn from the approved Harmonized System coding manual. They contain some abbreviations that have been left in the original form in this table.

^a Preliminary

Source: BC Stats and Statistics Canada

TABLE 26. TOP 25 BRITISH COLUMBIA HIGH TECHNOLOGY IMPORT COMMODITIES, 2012^a

HS Code	Commodity Description ¹	Value (\$000,000)	% Total imports
8471300000	Portable adpm, <= 10 kg, with cpu, keyboard and display	496.6	9.9
8517120020	Cellular telephones, other than for installation in motor vehicles	480.9	9.6
8517620090	Machines for t/c/t or regeneration voice, images or data, incl switching & routing app, nes	336.9	6.7
8471500090	Processing units, o/t 8471.41/.49, w/n cntg: storage/input/output unit, o/t CRT, nes	227.2	4.5
8528723300	Television receivers, colour, high definition, with flat panel screen, nes	180.9	3.6
3004900079	Medicaments, nes, for human use, in dosage	179.5	3.6
8803300000	Parts of airplanes or helicopters nes	119.5	2.4
8443990090	Other parts and accessories of printing machinery, nes	118.8	2.4
8525800050	Digital cameras and video camera recorders	113.4	2.3
8517700090	Parts tel sets; oth app for trans/recep voice/img/data, o/t 84.43, 85.25, 85.27, 85.28, nes ²	90.8	1.8
8411910020	Parts of turbo-jets or turbo-propellers for aircraft	89.5	1.8
3002100090	Antisera, other blood fract, immunological prod, w/n mod/obt biotechnological proc, nes	87.2	1.7
8471700013	Magnetic disc drives for hard magnetic disks, other than in form of system	77.0	1.5
8473309000	Parts & access (o/t printed circuit assy) of the machines of heading 84.71, nes ³	73.9	1.5
8523491090	Optical media, for reproducing phenomena o/t sound/image, nes; other software, nes	60.2	1.2
8471410090	Other digital auto data process mach containing CPU, input & output, other than CRT, nes	59.0	1.2
8528712000	TV reception apparatus, set-top boxes with communication function, etc.	57.9	1.2
9032890099	Automatic regulating and controlling instruments & apparatus, nes	57.5	1.1
8528510000	Other monitors, of a kind used in an automatic data processing system of hd 84.71	50.8	1.0
8542310022	Other monolithic integrated circuits, digital, unmtcd chips, dice or wafers, of silicon, nes	48.7	1.0
8443310000	Machines performing two or more functions of printg/cpyg/fax, conn to adpm or network	47.5	0.9
8411120010	Turbo-jets, for aircraft turbines, of a thrust exceeding 25 kN	46.5	0.9
3002100029	Antisera & o blood fract, human orig, therapeutic/prophylactic use in humans, nes	46.0	0.9
8544700090	Optical fibre cables, made up of individually sheathed fibre, etc, nes	39.4	0.8
8471700090	Other storage units, o/t presented in form of system, nes	37.5	0.7
Subtotal		3,323.0	64.1
	All Other High Technology Commodities	1,801.3	35.9
Total		5,024.2	100.0

HS code – Harmonized System commodity code; nes – Not Elsewhere Specified

1. Commodity descriptions are drawn from the approved Harmonized System coding manual. They contain some abbreviations that have been left in the original form in this table.

2. Refers to facsimile machines, transmission/reception apparatus for radio/TV broadcasting.

3. Refers to automatic data processing machines, magnetic or optical readers, etc.

^a Preliminary

Source: BC Stats

TABLE 27. BRITISH COLUMBIA DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS AND TOTAL GOODS, BY DESTINATION

	Value (\$000,000)										
	2002	2003 ¹	2004	2005	2006	2007	2008 ²	2009 ²	2010	2011	2012 ²
High Technology Exports											
United States	558.1	506.7	509.3	487.1	587.5	597.8	613.9	581.0	533.5	536.8	608.4
Mexico	1.7	1.9	3.6	4.7	4.8	7.8	6.8	6.1	7.3	6.3	10.6
European Union	58.3	51.5	65.7	70.3	106.6	126.7	188.2	123.9	144.8	147.3	145.0
United Kingdom	21.9	16.0	19.3	15.4	17.0	19.2	24.3	20.0	23.4	27.3	21.9
France	4.0	4.7	9.5	7.9	5.9	5.0	6.5	5.9	6.3	6.4	5.1
Germany	7.3	8.0	9.5	10.4	14.6	40.4	79.3	26.3	28.4	29.8	34.7
Italy	2.9	3.6	4.6	9.4	22.5	21.9	23.1	26.6	33.7	26.5	20.2
Netherlands	2.8	3.4	6.0	6.8	6.5	8.8	11.5	12.6	15.5	14.2	16.5
Pacific Rim	47.2	42.3	66.3	97.4	93.7	73.3	100.5	83.6	105.2	100.5	121.3
Hong Kong	3.3	6.2	10.9	14.9	9.8	5.0	8.6	14.7	20.9	18.8	17.3
Mainland China	4.1	10.3	14.5	23.3	17.6	14.4	21.6	13.7	21.3	19.5	20.7
Japan	22.0	7.3	11.3	20.0	19.7	16.1	23.3	11.1	9.7	10.5	23.7
South Korea	4.3	2.5	7.6	8.1	10.6	6.6	14.1	8.7	7.3	10.7	13.5
Taiwan	4.3	5.8	3.1	7.5	7.3	5.7	6.0	2.8	4.2	7.4	5.9
All Other Countries	19.3	32.8	41.8	45.6	64.0	63.1	69.2	62.5	82.1	108.9	109.0
Total	684.6	635.2	686.6	705.1	856.5	868.8	978.7	857.1	872.8	899.9	994.3
Total Exports											
United States	19,665.8	18,793.2	20,137.4	22,101.5	20,517.3	19,076.8	17,582.0	12,920.2	13,252.1	14,005.3	13,854.3
Mexico	79.0	108.6	198.4	237.0	185.3	195.8	343.6	162.1	192.3	156.1	101.2
European Union	1,817.8	1,883.0	2,186.0	2,452.8	2,255.4	2,318.0	2,617.1	1,688.1	2,022.3	2,322.2	1,792.8
United Kingdom	337.0	305.6	341.3	421.0	386.2	401.3	405.2	266.2	293.7	417.5	328.4
France	149.7	165.2	180.5	189.5	152.4	167.8	201.5	116.8	98.8	108.6	75.1
Germany	320.9	380.6	428.3	470.6	443.3	463.5	516.3	234.0	379.2	280.9	247.9
Italy	428.6	467.0	463.0	565.9	471.1	431.6	485.3	342.6	451.8	515.2	326.8
Netherlands	222.8	228.0	325.1	300.7	368.9	405.1	477.0	438.3	442.3	621.2	520.8
Pacific Rim	6,528.8	6,636.0	7,470.6	8,077.5	8,037.7	8,605.6	10,666.4	9,128.1	11,569.4	14,031.7	13,651.4
Hong Kong	207.7	179.8	252.1	213.2	199.2	166.3	237.9	210.0	238.2	260.5	218.6
Mainland China	756.3	919.5	1,225.4	1,325.5	1,485.6	1,722.8	1,961.7	2,501.4	3,817.1	4,802.4	5,752.3
Japan	3,858.5	3,660.0	3,805.1	4,163.8	4,709.8	4,134.5	5,026.1	3,551.0	4,193.7	4,645.6	4,119.2
South Korea	725.1	777.4	909.6	1,167.7	1,364.6	1,307.8	1,960.8	1,664.1	1,883.7	2,731.6	1,890.1
Taiwan	339.3	433.0	486.7	498.7	520.7	462.3	598.2	463.1	493.8	723.6	655.5
All Other Countries	737.0	844.6	1,015.4	1,298.5	1,470.3	1,327.4	1,914.9	1,341.8	1,610.0	2,167.0	1,907.2
Total	28,828.4	28,265.3	31,007.8	34,167.3	33,466.0	31,523.6	33,124.1	25,240.3	28,646.1	32,682.3	31,306.8
% change from previous year											
	2003 ¹	2004	2005	2006	2007	2008 ²	2009 ²	2010	2011	2012 ²	
High Technology Exports											
United States	-9.2	0.5	-4.3	20.6	1.8	2.7	-5.4	-8.2	0.6	13.3	
Mexico	9.5	88.7	31.4	2.8	62.6	-13.8	-9.2	19.2	-14.2	69.8	
European Union	-11.6	27.6	6.9	51.7	18.9	48.5	-34.2	16.9	1.8	-1.6	
United Kingdom	-26.8	20.6	-20.6	10.4	13.2	26.3	-17.6	17.1	15.7	-19.1	
France	17.3	102.7	-17.2	-24.8	-15.3	28.5	-8.2	5.3	3.1	-20.7	
Germany	9.9	18.4	9.8	40.3	176.5	96.3	-66.9	8.3	4.9	16.4	
Italy	23.2	26.7	104.2	140.0	-2.6	5.5	15.1	26.3	-21.2	-24.0	
Netherlands	20.2	75.4	13.6	-4.2	35.8	30.8	9.2	23.2	-8.5	15.7	
Pacific Rim	-10.3	56.7	46.9	-3.8	-21.7	37.1	-16.8	25.8	-4.4	20.6	
Hong Kong	86.6	74.6	37.0	-34.0	-48.9	72.2	70.1	41.8	0.7	-8.3	
Mainland China	152.5	40.6	60.7	-24.1	-18.6	50.0	-36.3	54.7	-8.3	6.2	
Japan	-66.6	50.5	80.8	-1.5	-18.1	44.3	-52.5	-12.1	7.9	125.9	
South Korea	-41.3	205.8	6.0	30.6	-37.2	112.0	-38.5	-15.3	45.4	26.3	
Taiwan	34.2	-46.0	139.9	-5.3	-19.0	5.3	-54.1	50.2	77.6	-19.7	
All Other Countries	70.1	27.4	9.2	40.2	-1.5	9.8	-9.8	31.4	32.7	0.1	
Total Growth	-7.2	8.1	2.7	21.5	1.4	12.7	-12.4	1.8	3.1	10.5	
Total Exports											
United States	-4.4	7.2	9.8	-7.2	-7.0	-7.8	-26.5	2.6	5.7	-1.1	
Mexico	37.4	82.7	19.5	-21.8	5.7	75.5	-52.8	18.6	-18.8	-35.2	
European Union	3.6	16.1	12.2	-8.0	2.8	12.9	-25.5	19.8	14.8	-22.8	
United Kingdom	-9.3	11.7	23.3	-8.3	3.9	1.0	-34.3	10.3	42.2	-21.3	
France	10.3	9.3	5.0	-19.6	10.1	20.1	-42.0	-15.5	9.9	-30.6	
Germany	18.6	12.5	9.0	-5.8	4.6	11.4	-54.7	62.1	-25.9	-11.7	
Italy	9.0	-0.9	22.2	16.7	-8.4	12.4	-29.4	31.9	14.0	-36.6	
Netherlands	2.3	42.6	-7.5	22.7	9.8	17.8	-8.1	0.9	40.4	-16.2	
Pacific Rim	1.6	12.6	8.1	11.9	-4.8	23.9	-14.4	26.7	21.3	-2.7	
Hong Kong	-13.4	40.2	-15.5	-6.5	-16.5	43.0	-11.7	13.4	9.3	-16.1	
Mainland China	21.6	33.3	8.2	12.1	16.0	11.9	27.5	53.4	25.2	19.8	
Japan	-5.1	4.0	9.4	13.1	-12.2	21.6	-29.3	18.1	10.8	-10.9	
South Korea	7.2	17.0	28.4	16.9	-4.2	40.9	-15.1	13.2	45.0	-30.8	
Taiwan	27.6	12.4	2.5	4.4	-11.2	29.4	-22.6	6.6	46.5	-8.4	
All Other Countries	14.6	20.2	27.9	13.2	9.7	44.3	-29.9	20.0	34.6	-12.0	
Total Growth	-2.0	9.7	10.2	-2.1	-5.8	5.1	-23.0	13.5	14.1	-4.2	

¹ Revised. ² Preliminary

Source: BC Stats and Statistics Canada

TABLE 28. BRITISH COLUMBIA IMPORTS OF HIGH TECHNOLOGY GOODS, BY COUNTRY OF ORIGIN

	Value (\$000,000)										
	2002 ¹	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²
United States	1,897.7	1,727.1	1,602.7	1,665.5	1,472.9	1,555.1	1,610.1	1,297.5	1,267.1	1,326.5	1,420.3
Mexico	216.7	227.8	278.3	328.3	402.4	500.1	543.6	456.8	506.9	601.3	529.8
European Union	762.4	495.4	416.5	374.8	398.3	405.1	500.2	500.6	491.1	514.3	515.1
United Kingdom	151.6	141.7	128.0	104.0	92.0	97.1	114.1	127.6	112.0	119.2	101.9
France	316.4	128.6	80.7	51.9	67.0	67.8	81.5	75.2	76.0	76.2	67.8
Germany	89.8	76.9	87.5	92.3	99.4	97.4	128.9	107.0	98.7	117.6	139.5
Italy	69.0	37.9	23.1	15.2	22.6	19.3	16.9	20.8	25.1	25.4	27.4
Netherlands	31.4	12.8	12.4	14.5	9.8	16.9	30.6	30.8	32.4	30.7	17.1
Pacific Rim	909.4	1,117.2	1,270.0	1,482.7	1,579.7	1,891.1	2,059.1	1,783.6	2,098.7	2,329.9	2,331.8
Hong Kong	10.0	10.8	6.3	9.7	10.9	11.1	12.5	11.0	9.9	3.9	3.7
Mainland China	201.9	339.0	487.0	666.0	787.0	969.7	1,108.9	1,044.0	1,329.6	1,501.6	1,595.1
Japan	241.3	242.7	248.7	262.0	234.4	262.0	265.9	192.0	201.9	204.6	220.2
South Korea	75.5	122.7	130.6	116.3	101.2	115.9	142.5	135.1	129.4	125.1	77.6
Taiwan	138.9	118.1	115.4	115.7	114.2	148.0	138.4	106.6	132.4	211.9	157.5
All Other Countries	260.2	183.2	196.5	340.3	224.9	287.9	258.9	217.9	233.5	208.8	227.2
Total Value	4,646.4	3,750.7	3,764.1	4,191.7	4,078.2	4,639.3	4,971.9	4,256.5	4,677.2	4,980.9	5,024.2
	% change from previous year										
	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²	
United States	-9.0	-7.2	3.9	-11.6	5.6	3.5	-19.4	-2.3	4.7	7.1	
Mexico	5.1	22.2	18.0	22.6	24.3	8.7	-16.0	28.5	2.5	-11.9	
European Union	-35.0	-15.9	-10.0	6.2	1.7	23.5	0.1	1.9	4.7	0.1	
United Kingdom	-6.5	-9.7	-18.8	-11.5	5.6	17.4	11.9	-12.2	6.4	-14.5	
France	-59.3	-37.2	-35.7	29.1	1.2	20.2	-7.7	1.1	0.2	-11.0	
Germany	-14.3	13.8	5.4	7.6	-1.9	32.3	-17.0	-7.7	19.1	18.7	
Italy	-45.0	-39.1	-34.0	48.0	-14.2	-12.7	23.0	21.0	0.9	8.1	
Netherlands	-59.1	-3.5	17.3	-32.3	72.1	80.7	0.9	5.1	-5.2	-44.4	
Pacific Rim	22.9	13.7	16.8	6.5	19.7	8.9	-13.4	17.7	11.0	0.1	
Hong Kong	8.3	-41.6	53.7	12.4	1.7	12.5	-11.4	-0.9	-61.2	-4.4	
Mainland China	67.9	43.7	36.7	18.2	23.2	14.4	-5.9	27.4	12.9	6.2	
Japan	0.6	2.5	13.4	-16.9	11.8	1.5	-27.8	5.2	1.4	7.6	
South Korea	62.4	6.5	-10.9	-13.0	14.6	22.9	-5.2	-4.2	-3.3	-38.0	
Taiwan	-15.0	-2.2	0.3	-1.3	29.5	-6.5	-22.9	24.2	60.0	-25.7	
All Other Countries	-29.6	7.2	73.2	-33.9	28.0	-10.1	-15.8	7.1	-10.6	8.8	
Total Growth	-7.3	0.4	11.4	-2.7	13.8	7.2	-14.4	9.9	6.5	0.9	

¹ Revised² Preliminary

Source: BC Stats

TABLE 29. BRITISH COLUMBIA BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS, BY COUNTRY

	Balance (\$000,000)										
	2002 ¹	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²
United States	-1,104.0	-998.9	-862.6	-932.7	-656.4	-889.6	-996.2	-716.4	-733.6	-787.3	-811.9
Mexico	-213.0	-224.1	-271.3	-320.2	-391.9	-488.1	-534.3	-450.0	-579.2	-593.5	-518.1
European Union	-680.8	-408.5	-306.8	-240.3	-202.0	-237.7	-281.4	-357.4	-332.6	-336.5	-330.0
United Kingdom	-119.4	-111.2	-86.6	-68.9	-62.6	-71.8	-80.4	-101.1	-84.4	-87.5	-75.8
France	-311.0	-123.5	-67.8	-42.0	-37.6	-61.8	-74.1	-67.4	-69.2	-67.1	-60.4
Germany	-76.4	-64.1	-73.4	-61.7	-55.2	-40.0	-39.8	-77.9	-67.0	-83.7	-93.2
Italy	-64.8	-34.0	-17.9	-5.8	0.3	2.8	6.8	6.1	8.6	1.3	-7.1
Netherlands	-28.2	-7.1	-5.7	0.2	5.0	1.8	-15.4	-17.3	-15.0	-12.5	2.1
Pacific Rim	-804.9	-954.0	-1,031.0	-1,180.5	-1,302.8	-1,636.2	-1,873.0	-1,665.0	-1,962.8	-2,162.4	-2,160.3
Hong Kong	14.1	27.7	42.4	69.5	45.3	32.1	10.6	7.0	16.5	28.2	23.8
Mainland China	-194.5	-306.8	-458.1	-630.3	-753.9	-921.9	-1,067.6	-1,025.0	-1,302.8	-1,472.3	-1,567.4
Japan	-204.4	-213.3	-214.9	-231.8	-190.6	-225.7	-237.0	-178.2	-190.0	-192.1	-193.4
South Korea	-66.1	-113.4	-108.3	-99.4	-81.1	-101.3	-123.0	-124.2	-118.0	-110.9	-62.9
Taiwan	-133.6	-110.2	-105.7	-98.7	-99.2	-136.9	-129.5	-103.1	-126.2	-203.4	-151.2
All Other Countries	-234.6	-143.9	-128.5	-243.6	-125.2	-167.7	-164.3	-67.0	-118.4	-53.2	-81.0
Total	-3,037.4	-2,729.5	-2,600.2	-2,917.3	-2,678.2	-3,419.3	-3,849.2	-3,255.8	-3,726.6	-3,932.9	-3,901.3

Note: The trade balance is the net of total exports minus total imports. Total exports include re-exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

¹ Revised² Preliminary

Source: BC Stats

TABLE 30. BRITISH COLUMBIA DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS, BY COMMODITY GROUP

	Value (\$000,000)										
	2002	2003 ¹	2004	2005	2006	2007	2008 ¹	2009 ¹	2010	2011	2012 ²
Biotechnology	1.7	2.0	4.3	7.9	7.2	4.1	2.9	3.5	3.1	2.5	3.9
Life Sciences	186.2	200.8	210.6	140.2	179.4	132.7	132.0	141.2	151.1	157.3	151.6
Opto-Electronics	70.9	35.3	34.0	35.7	37.1	49.7	124.2	48.3	39.1	41.6	34.0
Computers and Telecommunications	262.3	243.1	259.4	286.4	345.0	395.9	406.6	394.4	406.6	377.1	389.7
Electronics	4.6	4.1	8.9	15.4	14.1	6.4	11.9	34.7	5.7	10.5	27.8
Computer Integrated Manufacturing	47.5	62.5	97.5	104.1	101.0	94.0	109.8	89.8	99.9	119.8	134.5
Material Design	3.2	1.5	1.4	1.9	2.1	2.7	1.5	1.4	1.4	1.1	3.6
Aerospace	104.5	84.0	69.1	109.6	170.4	182.9	189.4	141.3	164.1	185.4	247.0
Weapons and Nuclear	3.9	2.0	1.4	4.1	0.2	0.4	0.5	2.7	1.9	4.5	2.3
Total	684.6	635.2	686.6	705.1	856.5	868.8	978.7	857.1	872.8	899.9	994.3
	% change from previous year										
	2003 ¹	2004	2005	2006	2007	2008 ¹	2009 ¹	2010	2011	2012 ²	
Biotechnology	19.1	112.5	83.9	-8.5	-43.8	-29.8	22.1	-10.1	-18.6	52.9	
Life Sciences	7.9	4.9	-33.4	28.0	-26.0	0.6	7.0	7.0	4.1	-3.6	
Opto-Electronics	-50.3	-3.6	4.9	4.1	33.9	149.8	-61.2	-19.0	6.4	-18.4	
Computers and Telecommunications	-7.3	6.7	10.4	20.5	14.7	2.7	-3.0	3.1	-7.2	3.3	
Electronics	-9.7	114.3	72.9	-8.4	-54.5	85.7	192.0	-83.6	83.6	166.0	
Computer Integrated Manufacturing	31.6	56.1	6.7	-3.0	-7.0	16.9	-18.2	11.2	20.0	12.2	
Material Design	-52.6	-3.5	29.5	13.5	27.1	-44.0	-8.9	-0.9	-18.1	224.9	
Aerospace	-19.6	-17.8	58.7	55.5	7.3	3.5	-25.4	16.1	13.0	33.2	
Weapons and Nuclear	-48.1	-29.9	191.0	-96.3	174.8	13.3	473.1	-31.2	142.5	-50.0	
Total	-7.2	8.1	2.7	21.5	1.4	12.7	-12.4	1.8	3.1	10.5	

¹ Revised² Preliminary

Source: BC Stats

TABLE 31. BRITISH COLUMBIA IMPORTS OF HIGH TECHNOLOGY GOODS, BY COMMODITY GROUP

	Value (\$000,000)										
	2002 ¹	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²
Biotechnology	53.3	46.8	34.3	35.3	43.8	59.9	84.9	102.7	125.8	143.4	153.9
Life Sciences	482.8	462.8	455.6	475.2	496.7	506.0	603.5	596.5	633.7	615.6	667.2
Opto-Electronics	117.1	106.3	123.5	205.1	299.6	337.9	403.7	289.7	337.0	313.4	271.5
Computers and Telecommunications	2,148.1	2,254.7	2,394.1	2,425.3	2,359.8	2,750.2	2,816.7	2,348.7	2,695.5	2,967.2	2,951.0
Electronics	194.1	173.9	140.5	245.6	253.2	253.6	278.3	290.1	308.6	306.6	270.0
Computer Integrated Manufacturing	191.2	205.2	188.5	181.8	195.8	159.6	149.2	138.9	154.0	189.5	236.7
Material Design	27.8	20.0	26.6	17.1	24.3	18.0	29.1	25.3	31.2	42.2	44.5
Aerospace	800.0	449.4	361.5	590.9	385.3	537.2	588.4	445.8	373.3	379.4	409.1
Weapons and Nuclear	31.9	31.7	39.5	15.3	19.7	16.8	18.4	18.9	18.1	23.5	20.6
Total	4,046.4	3,750.7	3,764.1	4,191.7	4,078.2	4,639.3	4,971.9	4,256.5	4,677.2	4,980.9	5,024.2
	% change from previous year										
	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²	
Biotechnology	-12.7	-26.7	3.1	24.0	36.8	41.8	20.9	22.5	14.0	7.3	
Life Sciences	-4.2	-1.5	4.3	4.5	1.9	19.3	-1.2	6.2	-2.9	8.4	
Opto-Electronics	-9.2	16.2	66.1	46.0	12.8	19.5	-28.2	16.3	-7.0	-13.4	
Computers and Telecommunications	5.0	6.2	1.3	-2.7	16.5	2.4	-16.6	14.8	10.1	-0.5	
Electronics	-10.4	-19.2	74.9	3.1	0.2	9.7	4.2	6.4	-0.6	-11.9	
Computer Integrated Manufacturing	7.3	-8.1	-3.6	7.7	-18.5	-6.5	-6.9	10.9	23.0	24.9	
Material Design	-28.1	33.1	-35.7	42.0	-26.0	61.5	-12.8	23.1	35.4	5.3	
Aerospace	-43.8	-19.6	63.5	-34.8	39.4	9.5	-24.2	-16.3	1.6	7.8	
Weapons and Nuclear	-0.8	24.6	-61.2	28.3	-14.5	9.2	3.1	-4.1	29.5	-12.4	
Total	-7.3	0.4	11.4	-2.7	13.8	7.2	-14.4	9.9	6.5	0.9	

¹ Revised² Preliminary

Source: BC Stats

TABLE 32. BRITISH COLUMBIA BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS, BY COMMODITY GROUP

	Balance (\$000,000)										
	2002 ^t	2003 ^t	2004 ^t	2005 ^t	2006 ^t	2007 ^t	2008 ^t	2009 ^t	2010	2011	2012 ^p
Biotechnology	-51.6	-44.7	-30.0	-27.3	-36.6	-55.8	-82.1	-99.2	-122.6	-140.9	-150.0
Life Sciences	-292.5	-256.2	-237.5	-325.6	-310.8	-367.6	-467.1	-451.4	-478.5	-452.7	-510.8
Opto-Electronics	-42.8	-69.4	-86.7	-165.6	-258.5	-286.3	-277.7	-237.6	-295.1	-268.4	-235.8
Computers and Telecommunications	-1,807.2	-1,935.9	-2,060.7	-2,046.7	-1,905.6	-2,296.5	-2,377.2	-1,925.4	-2,253.5	-2,534.9	-2,520.5
Electronics	-4.2	68.1	171.5	116.2	91.6	-56.8	-210.4	-248.4	-296.1	-287.6	-235.7
Computer Integrated Manufacturing	-139.1	-133.3	-80.1	-67.7	-80.6	-58.9	-35.2	-46.8	-51.5	-67.2	-100.3
Material Design	-22.9	-16.6	-24.8	-13.2	-21.0	-14.4	-27.4	-23.8	-29.6	-41.0	-40.7
Aerospace	-650.0	-312.5	-217.2	-376.9	-138.4	-267.4	-354.9	-207.5	-183.7	-121.7	-89.5
Weapons and Nuclear	-27.1	-28.9	-34.7	-10.5	-18.5	-15.5	-17.2	-15.6	-16.0	-18.6	-18.1
Total	-3,037.4	-2,729.5	-2,600.2	-2,917.3	-2,678.2	-3,419.3	-3,849.2	-3,255.8	-3,726.6	-3,932.9	-3,901.3

Note: The trade balance is the net of total exports minus total imports. Total exports include re-exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

^t Revised

^p Preliminary

Source: BC Stats

TABLE 33. B.C. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS TO THE UNITED STATES, BY COMMODITY GROUP

	Value (\$000,000)										
	2002	2003 ^t	2004	2005	2006	2007	2008 ^t	2009 ^t	2010	2011	2012 ^p
Biotechnology	1.6	1.4	1.8	3.3	2.0	1.3	0.3	1.0	0.8	0.4	0.6
Life Sciences	167.6	174.5	172.3	103.4	124.1	79.7	73.6	88.9	85.8	89.2	93.6
Opto-Electronics	54.2	25.3	22.1	19.9	18.7	21.8	25.2	14.1	14.0	18.3	13.0
Computers and Telecommunications	219.0	186.4	197.4	204.2	229.7	277.3	288.7	280.6	259.7	232.1	246.1
Electronics	2.3	2.5	3.2	4.0	3.7	2.6	4.8	31.3	1.2	1.5	6.4
Computer Integrated Manufacturing	39.0	45.4	56.1	62.4	58.3	57.9	65.5	47.4	50.0	58.3	58.7
Material Design	3.1	1.2	1.3	1.5	0.9	0.6	0.8	0.9	0.7	0.8	3.3
Aerospace	70.0	69.2	54.5	88.2	150.0	156.4	154.8	116.0	119.9	134.1	185.2
Weapons and Nuclear	1.3	0.8	0.4	0.2	0.1	0.3	0.3	0.9	1.3	2.2	1.5
Total	558.1	506.7	509.3	487.1	587.5	597.8	613.9	581.0	533.5	536.8	608.4
	% change from previous year										
		2003 ^t	2004	2005	2006	2007	2008 ^t	2009 ^t	2010	2011	2012 ^p
Biotechnology		-13.3	32.8	82.9	-40.3	-33.3	-79.2	254.5	-21.5	-48.5	49.7
Life Sciences		4.1	-1.3	-40.0	20.1	-35.8	-7.6	20.8	-3.5	4.0	4.9
Opto-Electronics		-53.4	-12.5	-10.1	-6.1	16.5	15.6	-43.9	-0.5	30.3	-28.7
Computers and Telecommunications		-14.9	5.9	3.4	12.5	20.7	4.1	-2.8	-7.5	-10.6	6.0
Electronics		8.9	29.0	25.4	-9.0	-29.9	87.5	547.9	-96.0	17.3	336.5
Computer Integrated Manufacturing		16.5	23.5	11.1	-6.5	-0.7	13.1	-27.6	5.5	16.4	0.8
Material Design		-62.7	12.0	14.6	-41.6	-27.8	20.5	16.0	-19.0	5.7	333.5
Aerospace		-1.2	-21.2	61.8	70.0	4.3	-1.0	-25.1	3.4	11.8	38.1
Weapons and Nuclear		-37.2	-50.2	-43.1	-54.3	181.1	-7.1	217.7	49.5	73.1	-34.1
Total		-9.2	0.5	-4.3	20.6	1.8	2.7	-5.4	-8.2	0.6	13.3

^t Revised

^p Preliminary

Source: BC Stats

TABLE 34. B.C. IMPORTS OF HIGH TECHNOLOGY GOODS FROM THE UNITED STATES, BY COMMODITY GROUP

	Value (\$000,000)										
	2002 ¹	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²
Biotechnology	22.4	21.6	17.8	17.0	19.2	22.8	24.3	28.9	34.4	44.3	46.8
Life Sciences	282.3	258.7	246.7	237.9	246.8	252.2	251.2	284.5	280.1	286.1	318.6
Opto-Electronics	48.3	32.5	35.8	34.9	40.9	29.0	39.8	21.4	30.2	33.7	14.0
Computers and Telecommunications	966.9	925.1	866.5	828.6	705.1	719.1	686.3	523.4	508.9	545.8	563.5
Electronics	100.3	85.0	69.4	121.6	98.1	98.3	97.1	90.1	105.4	91.4	105.4
Computer Integrated Manufacturing	128.8	131.6	119.1	104.7	123.5	88.5	76.9	70.9	76.9	84.2	120.5
Material Design	21.3	14.3	18.4	11.2	16.2	10.7	20.2	18.1	17.8	19.9	22.7
Aerospace	305.6	236.6	204.6	301.4	211.8	324.6	404.3	249.7	203.4	205.5	217.8
Weapons and Nuclear	21.7	21.7	24.5	8.4	11.4	9.9	10.1	10.5	9.9	15.5	11.0
Total	1,897.7	1,727.1	1,602.7	1,665.5	1,472.9	1,555.1	1,610.1	1,297.5	1,267.1	1,326.5	1,420.3
	% change from previous year										
	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²	
Biotechnology	-3.8	-17.5	-4.6	13.3	18.7	6.3	19.2	18.8	29.0	5.6	
Life Sciences	-8.4	-4.6	-3.6	3.7	2.2	-0.4	13.3	-1.5	2.1	11.4	
Opto-Electronics	-32.8	10.2	-2.4	17.2	-29.2	37.2	-46.2	41.2	11.7	-58.4	
Computers and Telecommunications	-4.3	-6.3	-4.4	-14.9	2.0	-4.6	-23.7	-2.8	7.2	3.2	
Electronics	-15.3	-18.4	75.2	-19.3	0.2	-1.2	-7.3	17.0	-13.3	15.4	
Computer Integrated Manufacturing	2.1	-9.5	-12.1	18.0	-28.3	-13.1	-7.8	8.5	9.5	43.1	
Material Design	-32.5	28.0	-39.0	44.6	-34.0	89.4	-10.4	-1.8	11.7	14.0	
Aerospace	-22.6	-13.5	47.3	-29.7	53.3	24.5	-38.2	-18.6	1.1	6.0	
Weapons and Nuclear	-0.2	13.2	-65.9	36.3	-12.6	1.4	4.1	-5.3	56.2	-29.2	
Total	-9.0	-7.2	3.9	-11.6	5.6	3.5	-19.4	-2.3	4.7	7.1	

¹ Revised² Preliminary

Source: BC Stats

TABLE 35. B.C. BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS WITH THE UNITED STATES, BY COMMODITY GROUP

	Balance (\$000,000)										
	2002 ¹	2003 ¹	2004 ¹	2005 ¹	2006 ¹	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012 ²
Biotechnology	-20.8	-20.2	-16.0	-13.5	-17.2	-21.5	-24.0	-28.0	-33.6	-43.9	-46.2
Life Sciences	-111.6	-80.2	-68.9	-129.4	-118.2	-171.0	-177.6	-195.6	-194.3	-196.8	-225.0
Opto-Electronics	8.0	-6.1	-11.5	-11.9	-19.7	-6.5	-14.6	-7.3	-16.2	-15.5	-1.0
Computers and Telecommunications	-679.0	-678.9	-608.5	-553.8	-386.9	-408.1	-397.5	-242.7	-249.3	-313.7	-317.4
Electronics	27.7	24.5	71.4	18.5	12.9	-75.2	-92.3	-58.8	-104.2	-89.9	-99.0
Computer Integrated Manufacturing	-85.5	-77.6	-55.1	-35.4	-56.5	-27.6	-11.4	-23.5	-26.9	-26.0	-61.8
Material Design	-16.5	-11.5	-16.8	-9.5	-14.7	-9.8	-19.5	-17.3	-17.1	-19.1	-19.4
Aerospace	-206.8	-128.3	-133.3	-189.8	-45.3	-160.5	-249.5	-133.7	-83.5	-69.1	-32.6
Weapons and Nuclear	-19.6	-20.7	-23.9	-7.9	-10.8	-9.4	-9.8	-9.6	-8.7	-13.3	-9.5
Total	-1,104.0	-998.9	-862.6	-932.7	-656.4	-889.6	-996.2	-716.4	-733.6	-787.3	-811.9

Note: The trade balance is the net of total exports minus total imports. Total exports include re exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

¹ Revised² Preliminary

Source: BC Stats

TABLE 36. B.C. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS TO THE PACIFIC RIM, BY COMMODITY GROUP

	Value (\$000,000)										
	2002	2003 ^f	2004	2005	2006	2007	2008 ^f	2009 ^f	2010	2011	2012 ^p
Biotechnology	0.0	0.1	0.5	0.7	0.1	0.1	0.2	0.2	0.1	0.1	0.2
Life Sciences	1.9	4.9	7.7	13.1	13.0	6.6	12.6	11.5	15.7	16.1	16.7
Opto-Electronics	11.0	4.4	4.8	8.7	5.1	4.5	6.1	5.4	8.6	7.5	6.4
Computers and Telecommunications	14.5	20.1	29.4	39.9	45.0	37.1	41.8	45.4	58.6	53.8	51.1
Electronics	1.7	1.1	3.2	10.3	9.3	3.1	5.3	1.4	1.5	0.8	11.2
Computer Integrated Manufacturing	3.4	6.8	14.4	14.7	15.9	9.0	15.9	11.9	12.3	16.9	26.6
Material Design	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.2
Aerospace	13.1	4.0	6.0	6.2	5.0	12.5	18.5	6.1	8.1	5.2	8.9
Weapons and Nuclear	1.7	0.9	0.3	3.8	0.0	0.1	0.1	1.7	0.1	0.0	0.1
Total	47.2	42.3	66.3	97.4	93.7	73.3	100.5	83.6	105.2	100.5	121.3
	% change from previous year										
	2003 ^f	2004	2005	2006	2007	2008 ^f	2009 ^f	2010	2011	2012 ^p	
Biotechnology	2547.2	240.5	44.5	-81.3	-13.7	35.3	28.0	-28.4	6.3	30.3	
Life Sciences	159.8	57.7	68.9	-0.5	-49.2	89.9	-8.6	36.8	2.3	4.2	
Opto-Electronics	-60.2	9.2	82.0	-41.0	-11.7	34.9	-12.1	60.1	-12.9	-14.4	
Computers and Telecommunications	38.9	46.2	35.8	12.8	-17.5	12.5	8.6	29.2	-8.1	-5.2	
Electronics	-35.3	194.3	225.9	-9.4	-66.9	72.9	-74.5	10.8	-49.1	1362.3	
Computer Integrated Manufacturing	101.2	112.3	2.1	8.6	-43.8	77.5	-25.2	3.4	37.1	57.6	
Material Design	642.9	19.5	-43.4	323.2	190.3	-73.5	-6.2	29.2	-33.6	126.8	
Aerospace	-69.2	47.9	4.2	-19.9	151.3	48.4	-67.0	32.7	-35.3	69.0	
Weapons and Nuclear	-50.2	-60.2	1003.7	-99.2	93.5	78.9	1493.3	-92.4	-65.8	50.6	
Total	-10.3	56.7	46.9	-3.8	-21.7	37.1	-16.8	25.8	-4.4	20.6	

^f Revised^p Preliminary

Source: BC Stats

TABLE 37. B.C. IMPORTS OF HIGH TECHNOLOGY GOODS FROM THE PACIFIC RIM, BY COMMODITY GROUP

	Value (\$000,000)										
	2002 ^f	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^p
Biotechnology	2.8	2.0	1.1	0.8	0.7	1.0	0.8	1.3	1.1	4.8	1.4
Life Sciences	28.9	29.3	35.0	38.5	40.4	44.6	59.1	47.8	67.6	66.3	67.5
Opto-Electronics	53.4	59.3	69.8	109.4	120.9	81.7	94.7	67.5	91.8	96.3	93.8
Computers and Telecommunications	713.0	912.3	1,062.7	1,178.7	1,248.6	1,582.9	1,694.1	1,451.9	1,712.5	1,908.7	1,947.8
Electronics	65.4	61.9	49.5	89.3	113.5	116.9	139.2	153.4	159.4	166.7	118.6
Computer Integrated Manufacturing	26.5	36.8	30.2	40.1	31.2	35.3	40.0	32.9	41.3	54.4	63.5
Material Design	2.0	1.6	2.0	1.7	2.8	2.0	3.0	2.6	3.6	5.4	4.5
Aerospace	15.4	11.7	17.3	22.4	19.9	24.8	26.4	24.8	19.9	25.1	33.1
Weapons and Nuclear	1.9	2.3	2.4	1.7	1.7	1.8	1.7	1.4	1.4	2.2	1.6
Total	909.4	1,117.2	1,270.0	1,482.7	1,579.7	1,891.1	2,059.1	1,783.6	2,098.7	2,329.9	2,331.8
	% change from previous year										
	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^p	
Biotechnology	-29.2	-43.4	-31.9	-7.1	42.6	-18.5	50.0	-11.9	335.1	-70.1	
Life Sciences	1.5	19.5	10.1	4.9	10.2	32.6	-19.0	41.4	-2.0	1.8	
Opto-Electronics	11.1	17.8	56.6	10.5	-32.4	15.9	-28.8	36.0	4.9	-2.6	
Computers and Telecommunications	28.0	16.5	10.9	5.9	26.8	7.0	-14.3	18.0	11.5	2.0	
Electronics	-5.4	-20.1	80.6	27.1	3.0	19.0	10.2	3.9	4.6	-28.8	
Computer Integrated Manufacturing	39.0	-18.1	32.9	-22.2	13.2	13.2	-17.6	25.5	31.7	16.7	
Material Design	-19.2	20.0	-12.6	62.4	-26.6	44.6	-11.7	36.7	50.2	-16.2	
Aerospace	-24.1	48.2	29.3	-11.4	24.9	6.5	-6.2	-19.9	26.5	31.7	
Weapons and Nuclear	18.1	5.2	-27.1	-2.8	6.2	-3.4	-16.7	-2.2	52.7	-26.8	
Total	22.9	13.7	16.8	6.5	19.7	8.9	-13.4	17.7	11.0	0.1	

^f Revised^p Preliminary

Source: BC Stats

TABLE 38. B.C. BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS WITH THE PACIFIC RIM, BY COMMODITY GROUP

	Balance (\$000,000)										
	2002 ^f	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^p
Biotechnology	-2.8	-1.9	-0.7	-0.1	-0.6	-0.9	-0.7	-1.1	-0.9	-4.7	-1.2
Life Sciences	-26.6	-23.4	-26.1	-24.9	-26.3	-36.4	-45.1	-34.9	-50.5	-47.3	-48.8
Opto-Electronics	-42.2	-54.9	-64.8	-100.5	-115.7	-76.6	-87.8	-61.7	-82.2	-86.4	-86.3
Computers and Telecommunications	-695.1	-883.6	-1,028.4	-1,132.2	-1,194.9	-1,537.9	-1,640.7	-1,398.6	-1,644.4	-1,836.4	-1,881.8
Electronics	-12.7	45.5	83.4	89.7	59.1	34.3	-87.0	-146.7	-152.8	-158.5	-102.2
Computer Integrated Manufacturing	-23.0	-29.6	-13.5	-23.9	-14.3	-23.3	-20.5	-20.2	-27.5	-36.9	-36.3
Material Design	-2.0	-1.6	-1.9	-1.4	-2.3	-1.7	-2.8	-2.4	-3.4	-5.2	-4.3
Aerospace	-0.3	-3.3	23.0	10.5	-6.1	7.9	13.2	0.2	0.1	14.9	2.2
Weapons and Nuclear	-0.2	-1.3	-2.0	2.1	-1.7	-1.6	-1.6	0.4	-1.3	-2.0	-1.5
Total	-804.9	-954.0	-1,031.0	-1,180.5	-1,302.8	-1,636.2	-1,873.0	-1,665.0	-1,962.8	-2,162.4	-2,160.3

Note: The trade balance is the net of total exports minus total imports. Total exports include re-exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[†] Revised

[†] Preliminary

Source: BC Stats

TABLE 39. B.C. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS TO MAINLAND CHINA, BY COMMODITY GROUP

	Value (\$000,000)										
	2002	2003 [†]	2004	2005	2006	2007	2008 [†]	2009 [†]	2010	2011	2012 [†]
Biotechnology	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Life Sciences	0.8	3.0	2.0	6.2	6.3	2.8	7.4	3.1	7.1	6.6	6.8
Opto-Electronics	0.1	0.2	0.1	0.3	0.2	1.0	0.8	2.3	1.0	0.9	1.1
Computers and Telecommunications	1.9	4.6	9.4	11.9	8.4	8.1	7.3	5.1	9.9	7.2	8.7
Electronics	0.2	0.4	0.2	1.4	0.2	0.3	2.4	0.5	0.5	0.2	0.1
Computer Integrated Manufacturing	1.0	1.5	2.4	3.3	2.4	1.6	2.1	2.0	2.2	4.0	3.3
Material Design	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aerospace	0.0	0.1	0.3	0.2	0.2	0.5	1.6	0.8	0.5	0.5	0.6
Weapons and Nuclear	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Total	4.1	10.3	14.5	23.3	17.6	14.4	21.6	13.7	21.3	19.5	20.7
	% change from previous year										
	2003 [†]	2004	2005	2006	2007	2008 [†]	2009 [†]	2010	2011	2012 [†]	
Biotechnology	-	523.0	39.9	80.9	-100.0	-	-	-69.5	-100.0	-	-
Life Sciences	267.8	-32.3	207.3	1.3	-55.3	164.2	-57.6	125.4	-6.8	2.8	2.8
Opto-Electronics	31.1	-22.5	137.0	-39.5	435.0	-17.6	185.5	-53.5	-12.9	16.4	16.4
Computers and Telecommunications	136.7	105.9	26.6	-29.4	-3.2	-10.5	-30.2	95.2	-27.1	20.5	20.5
Electronics	49.8	-48.5	645.3	-87.3	102.2	598.9	-81.2	3.4	-52.8	-47.9	-47.9
Computer Integrated Manufacturing	62.2	53.7	37.9	-27.7	-33.0	33.6	-5.1	9.4	83.1	-17.1	-17.1
Material Design	-100.0	-	-100.0	-	-97.1	-100.0	-	-	-16.2	394.0	394.0
Aerospace	256.6	458.3	-30.4	-20.0	173.7	217.0	-51.2	-29.5	-2.6	12.4	12.4
Weapons and Nuclear	4179.1	-95.6	-100.0	-	178.5	-100.0	-	-100.0	-	-	-
Total	152.5	40.6	60.7	-24.1	-18.6	50.0	-36.3	54.7	-8.3	6.2	6.2

[†] Revised

[†] Preliminary

Source: BC Stats

TABLE 40. B.C. IMPORTS OF HIGH TECHNOLOGY GOODS FROM MAINLAND CHINA, BY COMMODITY GROUP

	Value (\$000,000)										
	2002 ^f	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^g
Biotechnology	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.5	0.5	0.5
Life Sciences	8.1	7.9	9.3	6.6	6.4	8.4	13.1	12.2	21.0	16.1	22.2
Opto-Electronics	23.2	28.0	36.3	66.3	76.8	59.9	70.0	48.5	66.5	72.1	65.0
Computers and Telecommunications	165.1	296.3	432.6	578.5	683.6	881.3	1,001.9	955.5	1,206.6	1,377.3	1,468.0
Electronics	1.9	3.0	3.9	8.4	11.4	12.1	11.3	12.2	16.3	13.9	16.9
Computer Integrated Manufacturing	2.1	1.8	2.6	3.7	5.6	4.9	7.5	8.9	10.8	11.1	11.7
Material Design	0.3	0.4	0.7	0.7	1.4	0.8	1.5	1.3	2.1	3.3	3.2
Aerospace	0.5	0.8	0.8	0.9	1.2	1.2	2.4	4.2	4.8	6.3	6.6
Weapons and Nuclear	0.6	0.9	0.8	0.7	0.7	1.0	1.0	0.8	1.0	1.0	1.0
Total	201.9	339.0	487.0	666.0	787.0	969.7	1,108.9	1,044.0	1,329.6	1,501.6	1,595.1
	% change from previous year										
	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^g	
Biotechnology	-46.1	-37.3	66.7	-32.9	141.9	44.4	26.2	51.2	0.4	0.2	
Life Sciences	-1.4	16.6	-29.3	-2.4	31.9	55.5	-7.0	72.4	-23.4	38.0	
Opto-Electronics	20.7	29.7	82.8	15.8	-22.0	16.8	-30.7	37.1	8.3	-9.7	
Computers and Telecommunications	79.5	46.0	33.7	18.2	28.9	13.7	-4.6	26.3	14.1	6.6	
Electronics	53.6	29.7	118.9	34.8	6.2	-6.3	8.0	33.5	-14.7	21.3	
Computer Integrated Manufacturing	-16.4	48.4	44.3	49.4	-12.8	52.7	19.0	21.5	3.3	5.3	
Material Design	36.4	92.9	5.3	90.1	-40.3	79.0	-10.1	52.8	61.0	-2.0	
Aerospace	62.4	10.6	4.8	34.7	2.8	96.6	78.0	14.8	30.6	4.2	
Weapons and Nuclear	38.6	-1.6	-14.3	-6.6	41.7	8.5	-19.3	15.0	2.3	-3.9	
Total	67.9	43.7	36.7	18.2	23.2	14.4	-5.9	27.4	12.9	6.2	

[†] Revised[‡] Preliminary

Source: BC Stats

TABLE 41. B.C. BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS WITH MAINLAND CHINA, BY COMMODITY GROUP

	Balance (\$000,000)										
	2002 ^f	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^g
Biotechnology	-8.1	-7.9	-9.2	-6.5	-6.3	-8.4	-13.1	-12.2	-21.0	-16.1	-22.2
Life Sciences	-22.3	-25.0	-33.4	-60.1	-70.3	-56.9	-62.3	-45.0	-58.6	-63.3	-56.8
Opto-Electronics	-165.0	-296.1	-432.5	-578.2	-683.4	-879.9	-1,000.6	-953.0	-1,205.4	-1,376.1	-1,466.8
Computers and Telecommunications	0.4	8.0	6.8	5.6	0.4	-2.0	2.2	-4.8	-4.5	-3.5	-5.4
Electronics	1.1	13.5	8.1	6.6	5.7	26.1	5.1	-6.5	-9.1	-7.5	-9.1
Computer Integrated Manufacturing	0.7	1.5	3.2	3.2	1.2	0.9	2.9	1.0	1.2	0.8	0.2
Material Design	-0.5	-0.8	-0.8	-0.9	-0.8	-1.2	-2.4	-4.2	-4.8	-6.3	-6.6
Aerospace	-0.6	-0.5	-0.4	0.0	-0.3	-0.2	0.7	0.0	0.1	0.1	-0.2
Weapons and Nuclear	-0.6	-0.2	-0.8	-0.7	-0.7	-0.9	-1.0	-0.8	-1.0	-0.9	-0.9
Total	-194.5	-306.8	-458.1	-630.3	-753.9	-921.9	-1,067.6	-1,025.0	-1,302.8	-1,472.3	-1,567.4

Note: The trade balance is the net of total exports minus total imports. Total exports include re-exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[†] Revised[‡] Preliminary

Source: BC Stats

TABLE 42. B.C. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS TO JAPAN, BY COMMODITY GROUP

	Value (\$000,000)										
	2002	2003 [†]	2004	2005	2006	2007	2008 [†]	2009 [†]	2010	2011	2012 [†]
Biotechnology	0.0	0.1	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Life Sciences	0.5	0.8	1.4	1.7	2.1	0.4	0.7	1.1	0.4	0.4	2.7
Opto-Electronics	9.3	1.1	1.3	5.2	1.1	1.5	0.9	0.4	0.7	1.1	1.5
Computers and Telecommunications	2.6	3.1	4.2	5.7	11.3	8.3	9.5	8.5	7.8	7.3	6.6
Electronics	1.0	0.1	0.2	0.2	1.0	0.0	0.8	0.0	0.0	0.1	10.4
Computer Integrated Manufacturing	0.1	0.4	3.1	2.4	3.9	0.6	1.3	0.9	0.6	1.1	1.0
Material Design	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aerospace	8.6	1.8	0.5	0.6	0.2	5.3	10.1	0.1	0.2	0.5	1.5
Weapons and Nuclear	0.0	0.0	0.2	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	22.0	7.3	11.1	20.0	19.7	16.1	23.3	11.1	9.7	10.5	23.7
	% change from previous year										
	2003 [†]	2004	2005	2006	2007	2008 [†]	2009 [†]	2010	2011	2012 [†]	
Biotechnology	-	326.3	52.1	-97.7	-100.0	-	77.5	-100.0	-	-	-
Life Sciences	60.3	73.0	27.8	18.9	-82.7	87.4	63.9	-63.0	4.4	525.2	
Opto-Electronics	-88.5	18.3	306.6	-78.6	33.7	-42.2	-54.6	78.3	63.4	33.1	
Computers and Telecommunications	21.0	34.6	36.6	97.2	-26.6	13.8	-10.4	-8.1	-6.9	-8.8	
Electronics	-93.3	153.6	-3.3	541.7	-95.5	1716.4	-95.1	-45.0	264.6	12708.4	
Computer Integrated Manufacturing	448.0	788.7	-23.8	62.1	-85.3	131.5	-29.5	-38.2	91.8	-8.8	
Material Design	-	20.7	-83.5	467.7	-34.0	-28.5	118.9	-14.9	-63.9	173.7	
Aerospace	-78.8	-73.6	15.5	-55.1	2047.2	89.6	-99.2	149.7	122.7	206.1	
Weapons and Nuclear	-0.9	215.1	2422.0	-99.8	0.0	-100.0	-	-	-	-100.0	
Total	-66.6	50.5	80.8	-1.5	-18.1	44.3	-52.5	-12.1	7.9	125.9	

[†] Revised[†] Preliminary

Source: BC Stats

TABLE 43. B.C. IMPORTS OF HIGH TECHNOLOGY GOODS FROM JAPAN, BY COMMODITY GROUP

	Value (\$000,000)										
	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
Biotechnology	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
Life Sciences	14.5	14.4	17.0	21.7	23.8	21.7	26.4	19.2	20.7	22.3	22.6
Opto-Electronics	17.6	19.3	19.9	27.3	18.9	6.6	6.9	4.7	7.5	4.9	5.8
Computers and Telecommunications	160.5	156.0	166.6	172.7	143.1	173.8	172.0	120.2	123.8	116.6	122.4
Electronics	15.1	12.4	9.9	11.6	14.6	15.6	18.0	15.3	17.9	16.2	14.3
Computer Integrated Manufacturing	18.3	29.2	19.5	29.4	16.4	22.2	21.6	15.0	19.9	29.4	34.5
Material Design	1.2	0.9	0.8	0.5	0.9	0.8	1.0	0.7	0.7	0.5	0.6
Aerospace	12.8	9.4	14.0	18.1	16.0	20.7	19.6	16.4	10.9	14.0	19.2
Weapons and Nuclear	1.0	0.9	1.0	0.5	0.5	0.5	0.4	0.2	0.3	0.3	0.3
Total	241.3	242.7	248.7	282.0	234.4	262.0	265.9	192.0	201.9	204.6	220.2
	% change from previous year										
	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]	
Biotechnology	-17.5	-66.6	-46.4	19.2	44.6	51.5	65.8	15.6	18.7	17.5	
Life Sciences	-0.8	18.0	28.1	9.5	-8.8	21.7	-27.4	8.0	7.8	1.3	
Opto-Electronics	9.6	3.0	37.5	-30.6	-65.3	4.8	-31.2	58.9	-34.2	17.5	
Computers and Telecommunications	-2.8	6.8	3.7	-17.2	21.4	-1.0	-30.1	3.0	-5.8	5.0	
Electronics	-17.8	-20.8	17.9	26.1	6.5	15.1	-15.0	17.0	-9.4	-11.4	
Computer Integrated Manufacturing	59.7	-33.0	50.3	-44.0	35.2	-2.9	-30.3	32.3	48.0	17.3	
Material Design	-23.9	-14.3	-35.4	87.4	-10.9	22.5	-27.5	-5.5	-23.2	17.8	
Aerospace	-27.0	50.0	29.0	-11.7	29.3	-5.2	-16.1	-33.8	28.8	36.7	
Weapons and Nuclear	-3.6	8.9	-48.5	-5.8	5.6	-24.7	-47.5	46.0	2.9	9.1	
Total	0.6	2.5	13.4	-16.9	11.8	1.5	-27.8	5.2	1.4	7.6	

[†] Revised[†] Preliminary

Source: BC Stats

TABLE 44. B.C. BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS WITH JAPAN, BY COMMODITY GROUP

	Balance (\$000,000)										
	2002 ^f	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^p
Biotechnology	-14.5	-14.3	-16.7	-21.3	-23.8	-21.7	-26.4	-19.2	-20.7	-22.3	-22.6
Life Sciences	-16.9	-18.0	-18.4	-25.3	-16.4	-5.7	-5.5	-3.0	-6.7	-4.2	-3.0
Opto-Electronics	-151.0	-154.9	-165.3	-167.5	-142.0	-172.3	-171.1	-119.8	-123.0	-115.4	-120.2
Computers and Telecommunications	-12.1	-8.7	-5.0	-5.1	-3.0	-5.0	-8.0	-6.4	-9.8	-8.4	-7.4
Electronics	-3.2	-8.4	2.5	-0.5	7.1	-5.1	-16.6	-14.1	-18.7	-28.4	-23.8
Computer Integrated Manufacturing	-1.1	-0.5	2.4	2.0	3.2	-0.2	0.4	0.2	-0.1	0.6	0.4
Material Design	-12.8	-9.3	-14.0	-18.1	-16.0	-20.7	-19.6	-16.4	-10.9	-14.0	-19.1
Aerospace	7.6	1.0	-0.4	0.4	0.3	5.1	9.9	0.5	0.3	0.4	2.8
Weapons and Nuclear	-0.9	-0.8	-0.8	3.3	-0.5	-0.5	-0.4	-0.1	-0.3	-0.3	-0.3
Total	-204.4	-213.3	-214.9	-231.8	-190.6	-225.7	-237.0	-178.2	-190.0	-192.1	-193.4

Note: The trade balance is the net of total exports minus total imports. Total exports include re-exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

^f Revised

^p Preliminary

Source: BC Stats

TABLE 45. B.C. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS TO THE EUROPEAN UNION, BY COMMODITY GROUP

	Value (\$000,000)										
	2002	2003 ^f	2004	2005	2006	2007	2008 ^f	2009 ^f	2010	2011	2012 ^p
Biotechnology	0.1	0.3	1.0	1.4	0.8	1.1	1.4	1.7	1.9	1.5	2.1
Life Sciences	11.8	17.3	26.9	19.7	32.7	28.9	25.2	28.0	38.2	32.3	25.8
Opto-Electronics	3.4	3.0	3.2	3.6	5.4	18.1	85.6	22.4	9.4	7.8	5.1
Computers and Telecommunications	20.8	20.1	19.1	24.3	48.5	61.8	53.6	48.6	60.6	64.4	59.7
Electronics	0.4	0.2	2.0	0.3	0.6	0.6	0.6	0.6	0.3	0.3	4.8
Computer Integrated Manufacturing	1.1	2.3	8.6	10.5	11.0	8.5	12.1	12.0	17.6	21.3	24.9
Material Design	0.0	0.2	0.1	0.2	0.9	0.5	0.5	0.2	0.4	0.2	0.1
Aerospace	19.9	7.8	4.6	10.3	6.6	7.2	9.3	10.2	16.2	19.1	22.5
Weapons and Nuclear	0.8	0.3	0.2	0.0	0.0	0.0	0.1	0.1	0.2	0.5	0.1
Total	58.3	51.5	65.7	70.3	106.6	126.7	188.2	123.9	144.8	147.3	145.0
	% change from previous year										
	2003 ^f	2004	2005	2006	2007	2008 ^f	2009 ^f	2010	2011	2012 ^p	
Biotechnology	219.6	264.1	42.7	-41.1	32.7	28.4	20.4	8.8	-16.5	35.7	
Life Sciences	46.9	55.5	-27.0	66.4	-11.6	-13.0	11.3	36.4	-15.6	-20.1	
Opto-Electronics	-11.4	8.3	11.6	49.6	236.3	372.7	-73.8	-58.2	-16.5	-35.1	
Computers and Telecommunications	-3.7	-4.9	27.3	99.6	27.4	-13.3	-9.3	24.8	6.3	-7.3	
Electronics	-40.8	782.5	-87.8	154.8	-7.7	0.9	7.2	-53.5	-14.3	1786.4	
Computer Integrated Manufacturing	118.0	270.2	23.2	4.3	-22.8	42.3	-0.3	46.1	20.9	16.9	
Material Design	944.6	-66.8	184.4	429.6	-48.7	1.8	-60.7	102.4	-59.2	-29.4	
Aerospace	-60.7	-41.0	123.7	-36.4	10.2	28.2	10.5	58.2	17.7	17.7	
Weapons and Nuclear	-63.4	-34.0	-93.2	-66.0	645.1	159.8	-4.2	191.2	109.5	-75.8	
Total	-11.6	27.6	6.9	51.7	18.9	48.5	-34.2	16.9	1.8	-1.6	

^f Revised

^p Preliminary

Source: BC Stats

TABLE 46. B.C. IMPORTS OF HIGH TECHNOLOGY GOODS FROM THE EUROPEAN UNION, BY COMMODITY GROUP

	Value (\$000,000)										
	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
Biotechnology	22.5	19.3	14.4	14.1	19.6	30.9	53.3	53.6	56.0	75.0	65.4
Life Sciences	137.4	142.8	127.7	138.9	151.1	144.3	180.8	176.3	189.9	167.5	182.7
Opto-Electronics	7.7	9.3	8.8	13.1	9.0	10.1	16.8	6.2	7.6	9.5	7.2
Computers and Telecommunications	99.8	96.0	103.1	84.7	87.9	95.9	105.1	87.4	84.8	89.2	81.7
Electronics	11.8	13.8	10.9	14.3	14.2	13.3	13.4	10.6	12.1	17.1	14.5
Computer Integrated Manufacturing	27.0	23.7	25.9	25.8	27.4	24.5	22.9	24.2	22.8	35.8	35.7
Material Design	2.1	2.5	2.6	1.9	2.0	2.8	3.4	1.6	1.5	1.9	3.7
Aerospace	447.5	182.5	113.5	78.9	82.3	79.8	100.2	135.7	113.1	114.3	119.1
Weapons and Nuclear	6.5	5.4	9.7	3.2	4.7	3.5	4.2	5.1	3.3	4.0	5.1
Total	762.4	495.4	416.5	374.8	398.3	405.1	500.2	500.6	491.1	514.3	515.1
	% change from previous year										
	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
Biotechnology	-14.2	-25.3	-2.4	39.7	57.2	72.6	0.5	4.6	33.9	-12.8	
Life Sciences	3.9	-10.6	8.7	8.8	-4.5	25.3	-2.5	7.7	-11.8	9.1	
Opto-Electronics	21.2	-6.1	49.1	-31.2	12.0	66.3	-63.3	23.5	25.1	-24.2	
Computers and Telecommunications	-3.8	7.3	-17.8	3.7	9.1	9.6	-16.9	-3.0	5.3	-8.4	
Electronics	16.2	-20.9	31.8	-1.0	-6.6	1.0	-21.0	14.6	41.1	-15.5	
Computer Integrated Manufacturing	-12.0	9.1	-0.5	6.3	-10.5	-6.4	5.6	-5.7	56.7	-0.1	
Material Design	17.2	5.1	-29.2	10.2	35.3	23.6	-53.7	-6.4	26.7	96.1	
Aerospace	-59.2	-37.8	-30.5	4.3	-3.0	25.6	35.4	-16.7	1.1	4.2	
Weapons and Nuclear	-16.2	77.6	-66.5	46.6	-26.2	19.1	22.6	-35.0	20.9	26.2	
Total	-35.0	-15.9	-10.0	6.2	1.7	23.5	0.1	-1.9	4.7	0.1	

[†] Revised[‡] Preliminary

Source: BC Stats

TABLE 47. B.C. BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS WITH THE EUROPEAN UNION, BY COMMODITY GROUP

	Balance (\$000,000)										
	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
Biotechnology	-22.4	-19.0	-13.4	-12.7	-18.8	-29.8	-51.9	-51.9	-54.2	-73.5	-63.3
Life Sciences	-125.4	-125.4	-100.6	-116.8	-117.9	-114.6	-154.3	-147.7	-150.7	-134.7	-156.3
Opto-Electronics	-4.3	-6.0	-5.3	-9.3	-3.1	8.1	69.3	18.9	2.3	-1.4	-1.9
Computers and Telecommunications	-75.5	-70.4	-78.5	-49.8	-32.2	-24.2	-38.8	-33.5	-17.7	-5.0	-8.1
Electronics	-4.3	8.2	22.2	22.3	40.2	3.4	-6.8	-9.8	-11.7	-16.8	-9.3
Computer Integrated Manufacturing	-25.9	-21.3	-17.1	-14.1	-12.0	-15.6	-10.7	-11.1	-4.7	-13.4	-10.4
Material Design	-2.1	-2.2	-2.5	-1.1	-0.9	-1.6	-2.9	-1.4	-1.1	-1.7	-3.6
Aerospace	-415.4	-167.5	-102.2	-56.3	-53.1	-60.5	-81.9	-116.5	-92.2	-86.8	-72.4
Weapons and Nuclear	-5.6	-4.7	-9.4	-2.7	-4.2	-2.9	-3.4	-4.5	-2.8	-3.2	-4.7
Total	-680.8	-408.5	-306.8	-240.3	-202.0	-237.7	-281.4	-357.4	-332.6	-336.5	-330.0

Note: The trade balance is the net of total exports minus total imports. Total exports include re-exports, whereas domestic exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[†] Revised[‡] Preliminary

Source: BC Stats

TABLE 48. BRITISH COLUMBIA EXPORTS OF HIGH TECHNOLOGY SERVICES

	Value (\$ millions)										
	2002 [†]	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]
Computer-Related	644	658	678	727	806	678	625	601	594	617	603
Professional, Scientific and Technical	966	1,034	1,169	1,237	1,162	1,189	1,100	1,061	1,058	1,109	1,023
Other Services	361	405	355	417	460	424	415	401	413	419	450
Total	1,971	2,097	2,202	2,381	2,428	2,291	2,140	2,063	2,065	2,145	2,076
	% change from previous year										
	2003 [†]	2004 [†]	2005 [†]	2006 [†]	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [‡]	
Computer-Related	2.2	3.0	7.2	10.9	-15.9	-7.8	-3.8	-1.2	3.9	-2.3	
Professional, Scientific and Technical	7.0	13.1	5.8	-6.1	2.3	-7.5	-3.5	-0.3	4.8	-7.8	
Other Services	12.2	-12.3	17.5	10.3	-7.8	-2.1	-3.4	3.0	1.5	7.4	
Total	6.4	5.0	8.1	2.0	-5.6	-6.6	-3.6	0.1	3.9	-3.2	

[†] Revised[‡] Preliminary

Source: BC Stats

TABLE 49. DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS BY PROVINCE

	Value (\$ millions)										
	2002	2003 [†]	2004	2005	2006	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
British Columbia	684.6	635.2	686.6	705.1	856.5	868.8	978.7	857.1	872.8	899.9	994.3
Alberta	1,889.6	1,181.7	1,131.6	1,023.6	1,224.2	992.8	885.8	645.7	695.0	683.7	705.3
Manitoba	464.8	472.8	381.8	435.5	487.5	571.0	550.8	668.8	601.4	602.1	644.3
Ontario	10,287.7	8,439.5	9,386.0	10,917.6	11,461.0	11,329.6	11,515.0	10,868.7	9,807.4	8,663.8	8,682.0
Quebec	14,498.2	14,269.7	13,217.6	13,605.7	12,462.0	12,946.6	13,083.9	11,916.7	10,540.0	10,766.6	10,625.7
Canada	28,019.4	25,173.4	24,969.2	26,882.7	26,783.2	26,977.0	27,287.1	25,240.6	22,829.3	21,899.2	22,257.6
	% change from previous year										
	2003 [†]	2004	2005	2006	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]	
British Columbia	-7.2	8.1	2.7	21.5	1.4	12.7	-12.4	1.8	3.1	10.5	
Alberta	-37.5	-4.2	-9.5	19.6	-18.9	-10.8	-27.1	7.6	-1.6	3.2	
Manitoba	1.7	-19.3	14.1	11.9	17.1	-3.6	21.4	-10.1	0.1	7.0	
Ontario	-18.0	11.2	16.3	5.0	-1.1	1.6	-5.6	-9.8	-11.7	0.2	
Quebec	-1.6	-7.4	2.9	-8.4	3.9	1.1	-8.9	-11.6	2.1	-1.3	
Canada	-10.2	-0.8	7.7	-0.4	0.7	1.1	-7.5	-9.6	-4.1	1.6	
	High Technology Share of Total Domestic Exports (%)										
	2002	2003 [†]	2004	2005	2006	2007 [†]	2008 [†]	2009 [†]	2010	2011	2012 [†]
British Columbia	2.4	2.2	2.2	2.1	2.6	2.8	3.0	3.4	3.0	2.8	3.2
Alberta	3.9	2.1	1.8	1.3	1.6	1.2	0.8	0.9	0.9	0.7	0.7
Manitoba	4.9	5.1	4.1	4.7	4.8	4.7	4.2	6.3	5.9	5.2	5.8
Ontario	5.7	5.0	5.2	6.1	6.5	6.4	7.0	8.7	6.7	5.6	5.3
Quebec	22.1	23.4	20.5	20.3	18.0	19.3	18.9	21.2	18.2	17.3	17.1
Canada	7.7	7.1	6.5	6.6	6.5	6.4	6.0	7.5	6.1	5.2	5.2

Note that high technology exports for Canada, Alberta, Manitoba, Ontario and Quebec are based on high tech definitions developed for British Columbia. If these definitions were derived specifically for any of those regions, they might differ slightly.

[†] Revised

^{††} Preliminary

Source: BC Stats

TABLE 50. IMPORTS OF HIGH TECHNOLOGY GOODS, CANADA AND BRITISH COLUMBIA

	Value (\$ millions)										
	2002 ^f	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^g
British Columbia	4,046.4	3,750.7	3,764.1	4,191.7	4,078.2	4,639.3	4,971.9	4,256.5	4,677.2	4,980.9	5,024.2
Canada	43,920.2	40,492.8	43,649.2	45,900.1	46,680.7	50,309.9	52,735.8	47,902.0	51,077.0	53,565.6	53,729.6
	% change from previous year										
	2003 ^f	2004 ^f	2005 ^f	2006 ^f	2007 ^f	2008 ^f	2009 ^f	2010	2011	2012 ^g	
British Columbia	-7.3	0.4	11.4	-2.7	13.8	7.2	-14.4	9.9	6.5	0.9	
Canada	-7.8	7.8	5.2	1.7	7.8	4.8	-9.2	6.6	4.9	0.3	

Note that high technology exports for Canada are based on high tech definitions developed for British Columbia. If these definitions were derived specifically for Canada, they might differ slightly.

^f Revised

^g Preliminary

Source: BC Stats

TABLE 51. UNITED STATES HIGH TECHNOLOGY COMMODITY TRADE

	Value (\$US millions)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Domestic Exports	153,273.5	151,535.4	166,441.8	177,599.6	209,052.1	226,818.8	223,455.2	192,902.4	207,318.3	212,260.2	226,167.7
Re-Exports	25,353.8	28,251.2	35,012.2	38,006.1	43,517.1	46,624.7	52,362.4	51,826.1	65,992.3	74,562.6	78,986.1
Imports	196,100.1	207,196.2	238,478.3	259,968.7	290,848.0	326,928.8	331,372.0	300,681.0	354,252.9	386,480.5	396,115.9
Balance of Trade	-17,472.8	-27,409.7	-37,024.2	-44,363.0	-38,278.8	-53,485.2	-55,554.4	-55,952.5	-80,942.4	-99,657.7	-90,962.0
	% change from previous year										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Domestic Exports	-1.1	9.8	6.7	17.7	8.5	-1.5	-13.7	7.5	2.4	6.6	
Re-Exports		11.4	23.9	8.6	14.5	7.1	12.3	-1.0	27.3	13.0	5.9
Imports		5.7	15.1	9.0	11.9	12.4	1.4	-9.3	17.8	9.1	2.5
Balance of Trade		56.9	35.1	19.8	-13.7	39.7	3.9	0.7	44.7	23.1	-8.7

Source: United States Department of Commerce

TABLE 52. HIGH TECHNOLOGY TRADE COMPARISON: UNITED STATES VS. CANADA AND B.C. (IN CANADIAN \$)

	Value (\$Cdn millions)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Domestic Exports											
United States ^a	240,691.9	212,303.3	216,587.8	215,145.1	237,137.2	243,613.8	238,446.1	220,204.9	213,561.3	209,980.1	226,024.1
British Columbia	684.6	635.2	686.6	705.1	856.5	868.8	978.7	857.1	872.8	899.9	994.3
Canada	28,019.4	25,173.4	24,969.2	26,882.7	26,783.2	26,977.0	27,287.1	25,240.6	22,829.3	21,899.2	22,257.6
Imports											
United States ^a	307,944.4	290,285.0	310,327.5	314,927.4	329,922.0	351,136.5	353,602.7	343,237.9	364,920.6	382,328.9	395,864.4
British Columbia	4,046.4	3,750.7	3,764.1	4,191.7	4,078.2	4,639.3	4,971.9	4,256.5	4,677.2	4,980.9	5,024.2
Canada	43,920.2	40,492.8	43,649.2	45,900.1	46,680.7	50,309.9	52,735.8	47,902.0	51,077.0	53,565.6	53,729.6
	% change from previous year										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Domestic Exports											
United States ^a	-11.8	2.0	-0.7	10.2	2.7	-2.1	-7.7	-3.0	-1.7	7.6	
British Columbia	-7.2	8.1	2.7	21.5	1.4	12.7	-12.4	1.8	3.1	10.5	
Canada	-10.2	-0.8	7.7	-0.4	0.7	1.1	-7.5	-9.6	-4.1	1.6	
Imports											
United States ^a	-5.7	6.9	1.5	4.8	6.4	0.7	-2.9	6.3	4.8	3.5	
British Columbia	-7.3	0.4	11.4	-2.7	13.8	7.2	-14.4	9.9	6.5	0.9	
Canada	-7.8	7.8	5.2	1.7	7.8	4.8	-9.2	6.6	4.9	0.3	

^a Converted from U.S. dollars using an average annual exchange rate.

Source: BC Stats and United States Department of Commerce

TABLE 53. UNITED STATES DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS, BY COMMODITY GROUP

	Value (\$US millions)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Biotechnology	2,115.5	2,844.2	3,714.2	4,553.5	5,120.2	7,467.2	9,364.6	12,149.8	11,335.9	8,857.3	9,811.8
Life Sciences	11,116.2	12,026.6	13,218.3	15,042.4	17,121.3	19,547.5	22,353.0	22,466.1	24,298.8	25,520.3	27,423.2
Opto-Electronics	2,179.7	2,121.9	3,055.2	3,838.2	4,303.3	4,768.3	4,175.9	3,403.8	5,145.0	4,896.3	4,072.3
Computers and Telecommunications	42,336.4	39,407.5	42,150.2	44,076.6	46,606.7	49,161.2	48,042.8	37,502.3	39,746.4	41,849.8	42,944.5
Electronics	32,449.7	36,371.9	35,944.7	34,912.0	38,648.8	36,279.0	36,491.9	25,076.8	30,532.5	28,755.5	26,638.6
Computer Integrated Manufacturing	7,997.3	7,651.5	12,302.4	11,092.3	13,810.3	13,623.6	10,293.8	7,314.0	14,034.1	12,473.2	12,411.5
Material Design	1,032.7	981.8	1,055.5	1,056.9	1,274.8	1,531.5	1,703.9	1,479.1	1,857.3	1,826.7	1,864.1
Aerospace	50,937.6	47,333.9	51,862.5	60,528.1	78,597.9	90,011.6	86,973.4	78,940.9	75,730.6	83,540.8	96,712.2
Weapons and Nuclear	3,108.4	2,796.1	3,138.8	2,499.8	3,568.9	4,428.8	4,055.8	4,617.5	4,637.7	4,480.2	4,269.7
Total	153,273.5	151,535.4	166,441.8	177,599.6	209,052.1	226,810.8	223,455.2	192,902.4	207,310.3	212,260.2	226,167.7
	% change from previous year										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Biotechnology	34.4	30.6	22.6	12.4	45.8	25.4	29.7	-6.7	-21.9	11.0	
Life Sciences	8.2	9.9	13.8	13.8	14.2	14.4	0.5	8.1	5.0	7.5	
Opto-Electronics	-2.7	44.0	25.6	12.1	10.8	-12.4	-18.5	51.2	-4.8	-16.8	
Computers and Telecommunications	-6.9	7.0	4.6	5.7	5.5	-2.3	-21.9	6.0	5.5	2.4	
Electronics	12.1	-1.2	-2.9	10.7	-6.1	0.6	-31.4	22.0	-5.8	-7.4	
Computer Integrated Manufacturing	-4.3	60.8	-9.8	24.5	-1.4	-24.4	-28.9	91.9	-11.1	-0.5	
Material Design	-4.9	7.5	0.1	20.6	20.1	11.3	-13.2	25.6	-1.6	2.0	
Aerospace	-7.1	9.6	16.7	29.9	14.5	-3.4	-9.2	-4.1	10.3	15.8	
Weapons and Nuclear	-10.0	12.3	-20.4	42.8	24.1	-8.4	13.8	0.4	-4.3	-3.8	
Total	-1.1	9.8	6.7	17.7	8.5	-1.5	-13.7	7.5	2.4	6.4	

Source: United States Department of Commerce

TABLE 54. UNITED STATES IMPORTS OF HIGH TECHNOLOGY GOODS, BY COMMODITY GROUP

	Value (\$US millions)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Biotechnology	1,871.9	2,183.9	1,967.4	4,218.8	4,877.6	6,441.6	5,758.3	5,635.0	7,609.7	11,718.1	11,406.8
Life Sciences	25,950.3	30,936.9	32,799.0	30,390.3	33,736.6	36,736.0	39,934.4	38,081.0	41,815.5	45,833.7	44,285.3
Opto-Electronics	5,436.6	5,254.9	7,795.0	12,173.5	19,573.0	24,973.7	25,568.6	23,290.9	25,933.7	26,108.8	26,391.7
Computers and Telecommunications	100,765.9	110,088.5	132,539.0	147,188.5	160,836.8	179,710.6	181,801.8	169,862.5	205,037.7	212,119.2	219,455.2
Electronics	26,649.5	25,135.2	27,454.0	26,594.4	28,009.1	27,033.2	25,644.7	20,900.1	27,706.1	34,039.7	33,870.8
Computer Integrated Manufacturing	6,562.2	6,262.8	7,587.2	8,897.2	10,289.6	10,766.1	10,084.2	6,689.1	9,301.4	14,393.4	13,933.2
Material Design	1,484.9	1,510.5	1,794.4	1,803.8	2,170.8	2,383.7	2,254.5	1,505.2	1,895.5	2,232.0	2,120.3
Aerospace	25,212.9	22,773.1	23,832.8	25,531.4	27,584.3	33,851.3	35,022.4	29,646.3	29,129.3	34,897.3	39,355.3
Weapons and Nuclear	2,165.9	3,050.4	2,709.5	3,170.8	3,773.1	5,532.6	5,303.0	5,068.9	5,704.0	5,138.2	5,295.2
Total	196,100.1	207,196.2	238,478.3	259,968.7	290,848.0	326,928.8	331,372.0	305,281.2	354,252.9	386,480.5	396,115.9
	% change from previous year										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Biotechnology	16.7	-9.9	114.4	15.5	32.2	-10.6	-2.1	35.0	54.0	-2.7	
Life Sciences	19.2	6.0	-7.3	11.0	7.4	10.2	-4.6	9.9	9.6	-3.4	
Opto-Electronics	-3.3	48.3	56.2	60.8	27.6	2.4	-8.9	11.3	0.7	1.1	
Computers and Telecommunications	9.3	20.4	11.1	9.3	11.7	1.2	-6.6	20.7	3.5	3.5	
Electronics	-5.7	9.2	-3.1	5.3	-3.5	-5.1	-18.5	32.6	22.9	-0.5	
Computer Integrated Manufacturing	-4.6	21.1	17.3	15.6	4.6	-6.3	-33.7	39.1	54.7	-3.2	
Material Design	1.7	18.8	0.5	20.3	9.8	-5.4	-33.2	32.6	11.8	-5.0	
Aerospace	-9.7	4.7	7.1	8.0	22.7	3.5	-15.4	-1.7	19.8	12.8	
Weapons and Nuclear	40.8	-11.2	17.0	19.0	46.6	-4.1	-4.4	12.5	-9.9	3.1	
Total	5.7	15.1	9.0	11.9	12.4	1.4	-9.3	17.8	9.1	2.5	

Source: United States Department of Commerce

TABLE 55. UNITED STATES BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS, BY COMMODITY GROUP

	Balance (\$US millions)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Biotechnology	258.6	678.9	1,775.8	373.7	290.5	1,101.9	3,672.8	6,645.5	4,099.6	-2,778.4	-1,461.8
Life Sciences	-14,091.7	-17,934.8	-18,283.1	-13,896.4	-14,980.5	-14,652.8	-14,757.6	-12,815.8	-13,998.0	-16,635.8	-12,748.4
Opto-Electronics	-3,006.1	-2,787.9	-4,288.6	-7,536.7	-14,511.4	-19,506.4	-20,533.2	-18,799.1	-19,731.0	-20,091.2	-21,190.4
Computers and Telecommunications	-47,456.6	-56,960.7	-73,328.9	-83,180.2	-91,595.9	-104,913.2	-104,252.8	-103,184.5	-127,297.5	-122,658.9	-127,880.7
Electronics	16,113.4	21,462.0	21,110.4	20,949.4	25,406.2	23,510.0	25,154.4	16,366.4	18,355.7	9,244.9	7,338.4
Computer Integrated Manufacturing	2,000.3	2,056.9	5,457.1	2,956.9	4,375.2	3,886.4	1,450.1	1,670.4	6,522.0	-180.7	20.9
Material Design	-396.0	-474.0	-657.2	-648.8	-769.7	-718.0	-360.4	213.9	174.1	-61.7	83.1
Aerospace	28,042.3	26,659.8	30,544.5	37,206.3	53,632.3	58,823.2	55,221.2	54,316.4	51,934.6	54,104.7	65,744.6
Weapons and Nuclear	1,063.0	-109.8	645.7	-587.0	-175.3	-1,016.3	-1,148.8	-365.6	-1,001.8	-603.5	-867.8
Total	-17,472.8	-27,409.7	-37,024.2	-44,363.0	-38,278.0	-53,485.2	-55,554.4	-55,952.5	-60,942.4	-99,657.7	-90,962.0

Note: The trade balance is the net of total exports minus total imports. Total exports include to exports, whereas domestic exports are shipments of goods produced within the United States only.

Source: United States Department of Commerce

TABLE 56. UNITED STATES DOMESTIC EXPORTS OF HIGH TECHNOLOGY GOODS, BY DESTINATION

	Value (\$US millions)											
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Canada	12,436.3	12,218.8	13,446.4	15,020.1	14,509.7	16,168.3	17,040.0	14,381.6	15,412.8	16,567.6	16,045.3	
Mexico	8,102.0	7,449.5	8,123.5	7,949.1	9,783.9	9,932.1	10,671.4	8,944.1	10,127.0	10,478.8	12,332.2	
European Union	44,951.8	44,636.1	49,680.4	51,168.5	56,776.5	66,096.2	66,459.6	62,233.0	56,988.7	56,981.2	55,673.4	
United Kingdom	9,074.4	9,256.4	10,019.4	10,145.3	11,128.4	11,918.1	12,153.2	11,561.8	10,310.5	11,853.7	11,199.2	
Germany	8,589.3	8,433.9	8,146.5	9,377.4	11,486.8	14,390.1	15,103.3	15,394.4	14,889.4	11,551.7	11,313.4	
France	7,904.2	5,956.8	8,335.2	8,431.3	9,177.5	10,830.9	9,674.5	10,397.7	9,308.0	9,154.3	9,353.3	
Ireland	2,584.6	2,960.2	3,321.7	3,715.7	3,489.4	3,902.4	3,589.6	5,110.4	2,470.3	2,203.9	2,059.5	
Pacific Rim	67,501.6	69,612.5	74,042.6	76,571.4	90,841.0	91,094.3	83,842.8	66,230.4	83,501.5	81,892.0	86,267.2	
Mainland China	7,339.2	7,356.9	8,235.3	10,749.4	15,427.3	17,548.6	15,936.9	14,180.0	17,745.3	16,539.3	17,861.0	
Japan	15,291.5	15,569.4	16,373.8	16,103.2	17,792.0	18,057.0	16,277.5	12,456.9	13,482.2	13,703.3	17,026.1	
South Korea	8,706.4	8,678.9	9,649.7	10,658.6	13,266.5	11,487.1	9,358.4	7,342.4	10,278.7	10,508.8	11,742.7	
Taiwan	7,901.8	7,199.7	8,964.2	9,021.0	9,222.7	10,798.9	8,918.4	5,736.8	8,933.5	7,287.4	6,716.4	
Malaysia	6,547.8	7,191.7	6,835.0	6,301.1	7,426.3	5,822.6	6,718.7	4,927.3	6,795.0	6,470.8	5,448.4	
All Other Countries	20,280.8	17,618.6	20,499.0	26,890.4	37,141.0	42,928.0	45,441.4	41,113.4	41,288.3	46,340.6	55,849.5	
Total Value	153,273.5	151,535.4	164,441.8	177,599.6	209,052.1	226,818.8	223,455.2	192,902.4	207,318.3	212,200.2	226,167.7	
	% change from previous year											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
Canada	-1.7	10.0	11.7	3.4	11.4	5.4	-15.6	7.2	7.5	3.2		
Mexico	-8.1	11.7	-4.5	23.1	1.5	7.4	-16.2	13.2	3.5	17.7		
European Union	-0.7	11.3	3.0	11.0	17.5	-0.4	-6.4	-8.4	0.0	-2.3		
United Kingdom	2.0	8.2	1.3	9.7	7.1	2.0	-4.9	-10.8	15.0	-5.5		
Germany	-1.8	-3.4	15.1	22.5	25.3	5.0	1.9	-3.3	-27.4	-2.1		
France	-24.6	39.9	1.2	8.9	18.0	-10.7	7.5	-10.5	-1.7	2.2		
Ireland	14.5	12.2	11.9	-6.1	11.8	-8.0	-13.3	-20.6	-10.8	-6.6		
Pacific Rim	3.1	6.4	3.4	18.6	0.3	-8.0	-21.0	26.1	-1.9	5.1		
Mainland China	0.2	11.9	30.5	43.5	13.7	-9.2	-11.0	25.1	-6.8	8.0		
Japan	1.8	5.2	-1.7	10.5	1.5	-10.1	-23.2	8.2	1.6	24.2		
South Korea	-0.3	11.2	10.5	24.5	-13.4	-18.5	-21.5	40.0	2.2	11.7		
Taiwan	-8.9	24.5	0.6	2.2	17.1	-17.4	-35.7	55.7	-18.4	-7.8		
Malaysia	9.8	-4.9	-7.8	17.9	-21.6	15.4	-26.7	37.9	-4.8	-15.8		
All Other Countries	-13.1	18.9	28.4	38.1	15.6	5.9	-9.5	0.4	12.2	20.5		
Total Growth	-1.1	9.8	6.7	17.7	8.5	-1.6	-13.7	7.5	2.4	6.6		

Source: United States Department of Commerce

TABLE 57. UNITED STATES IMPORTS OF HIGH TECHNOLOGY GOODS, BY COUNTRY OF ORIGIN

	Value (\$US millions)											
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Canada	13,769.3	13,722.6	13,844.2	15,806.1	14,949.1	17,801.2	16,628.0	14,262.9	12,863.7	13,576.6	14,052.3	
Mexico	16,271.5	17,954.6	22,143.0	23,990.5	30,887.2	30,643.3	40,319.9	39,722.0	48,733.0	47,781.9	49,626.9	
European Union	48,450.3	49,548.0	51,383.5	53,704.5	58,696.6	65,565.7	68,946.1	60,211.1	65,597.5	75,522.0	74,111.8	
United Kingdom	7,172.8	6,847.1	7,411.5	7,271.4	9,398.9	9,969.7	10,785.9	9,272.6	9,531.6	10,116.7	10,920.3	
Germany	8,074.9	8,007.9	9,595.4	11,035.3	11,404.2	11,885.8	11,628.2	10,400.7	10,099.7	12,688.6	13,569.5	
France	9,617.5	9,206.0	8,836.6	8,486.6	9,834.5	12,259.4	12,025.6	10,176.7	10,434.5	11,205.8	11,581.3	
Ireland	13,233.2	14,573.9	13,433.0	14,046.8	14,225.3	16,043.1	17,698.8	14,451.2	17,505.9	21,701.1	18,861.1	
Pacific Rim	108,043.2	115,773.0	140,575.5	154,955.1	174,729.5	192,441.6	191,471.5	171,163.0	209,322.3	228,693.3	235,348.2	
Mainland China	20,093.6	20,345.2	45,698.2	50,251.2	72,708.8	88,006.4	91,392.9	89,698.6	115,631.0	129,496.2	141,176.1	
Japan	23,744.4	22,386.0	21,876.9	24,590.7	25,839.3	28,117.0	26,720.1	19,869.3	23,314.0	25,617.5	25,068.6	
South Korea	13,827.4	14,412.9	17,977.8	13,977.5	13,699.9	14,861.2	16,393.4	15,234.0	17,433.5	17,543.8	13,949.8	
Taiwan	13,378.7	12,044.6	12,810.4	12,274.9	14,070.5	14,767.2	13,782.3	12,130.7	15,380.9	18,704.0	15,137.9	
Malaysia	15,150.4	16,384.4	18,204.0	22,658.9	25,104.8	22,455.6	20,102.4	14,900.4	15,248.2	14,103.6	14,539.2	
All Other Countries	9,565.8	10,197.9	10,531.2	11,512.5	11,585.7	12,476.9	14,006.5	15,322.0	17,736.4	20,906.8	22,976.7	
Total Value	196,106.1	207,196.2	238,478.3	259,968.7	290,848.0	326,479.8	331,372.0	300,681.0	354,252.9	386,480.5	396,115.9	
	% change from previous year											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
Canada	-0.3	0.9	14.2	-5.4	19.1	-6.6	-14.2	-9.8	5.5	3.5		
Mexico	10.3	23.3	8.3	28.7	25.1	4.3	-1.5	22.7	-2.0	3.9		
European Union	2.3	3.7	4.5	9.3	11.7	5.2	-12.7	8.9	15.1	-1.9		
United Kingdom	-4.5	8.2	-1.9	29.3	6.1	8.2	-14.0	2.8	6.1	7.9		
Germany	-0.8	19.8	15.0	3.3	4.2	-2.2	-10.6	-2.9	25.6	6.9		
France	-4.3	-4.0	-4.0	15.9	24.7	-1.9	-15.4	2.5	7.4	3.4		
Ireland	10.1	-7.8	4.6	1.3	12.8	10.3	-18.3	21.1	24.0	-13.1		
Pacific Rim	7.2	21.4	10.2	12.8	10.1	-0.5	-10.6	22.3	9.3	2.9		
Mainland China	46.0	55.7	29.7	22.7	21.0	3.8	-1.9	28.9	12.0	9.0		
Japan	-5.7	6.7	3.0	5.1	8.8	-5.0	-25.6	17.3	9.9	-2.1		
South Korea	4.2	24.7	-22.3	-2.0	8.5	10.3	-7.1	14.4	0.6	-20.5		
Taiwan	-10.0	6.4	-4.2	14.6	5.0	-6.7	-12.0	26.8	21.6	-19.1		
Malaysia	8.1	11.1	24.5	10.8	-10.6	-10.5	-25.9	2.3	-7.5	3.1		
All Other Countries	6.6	3.3	9.3	0.6	7.7	12.3	9.4	15.8	17.9	9.9		
Total Growth	9.7	15.1	9.0	11.9	12.4	1.4	-9.3	17.8	9.1	2.5		

Source: United States Department of Commerce

TABLE 58. UNITED STATES BALANCE OF TRADE IN HIGH TECHNOLOGY GOODS, BY COUNTRY

	Balance (\$US millions)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Canada	3,651.0	4,305.1	6,594.2	7,229.4	8,654.3	8,430.9	10,857.1	9,569.2	15,184.8	17,073.5	15,268.5
Mexico	-3,687.0	-4,350.0	-5,635.3	-7,428.2	-12,225.3	-21,407.1	-20,709.5	-19,093.2	-21,489.2	-15,856.8	-16,374.8
European Union	1,243.7	176.5	4,913.9	4,068.7	5,465.5	9,389.1	6,748.7	9,891.1	538.5	8,597.7	-7,225.4
United Kingdom	3,417.4	3,986.7	4,661.8	4,368.5	3,281.3	3,583.5	3,005.7	3,709.0	2,534.6	3,849.4	2,662.1
Germany	1,266.9	1,298.9	-255.2	-356.1	1,561.8	4,568.0	5,519.9	6,467.1	6,490.6	659.9	-385.1
France	-1,108.9	-2,533.7	329.1	756.3	215.4	-467.6	-1,163.1	1,369.9	179.7	-773.0	-346.4
Ireland	-10,409.9	-11,288.1	-9,697.8	-9,846.9	-10,200.0	-11,677.2	-13,675.2	-10,935.1	-14,708.0	-19,222.6	-16,445.6
Pacific Rim	-31,650.7	-37,560.4	-56,576.7	-67,897.1	-71,096.7	-86,693.1	-92,056.2	-90,659.7	-109,335.5	-129,750.1	-129,856.0
Mainland China	-11,790.0	-21,055.1	-36,297.0	-46,932.7	-55,081.6	-67,657.5	-72,660.2	-72,493.3	-94,202.3	-109,356.8	-119,045.0
Japan	-6,895.1	-5,440.9	-5,713.4	-6,814.0	-6,300.2	-8,133.5	-7,979.0	-5,657.7	-7,761.7	-9,906.6	-5,627.1
South Korea	-4,228.8	-4,843.4	-7,636.4	-2,574.1	408.2	-2,446.3	-6,144.7	-7,132.8	-6,398.5	-6,736.6	-1,070.7
Taiwan	-4,207.2	-3,818.7	-2,858.3	-2,270.4	-3,737.4	-2,627.0	-3,685.8	-5,106.0	-4,889.7	-9,895.4	-6,525.6
Malaysia	-7,915.6	-8,578.2	-10,649.2	-15,605.1	-16,584.0	-15,420.4	-12,133.7	-8,694.9	-6,790.6	-6,063.2	-7,452.3
All Other Countries	12,870.1	10,019.1	13,679.6	19,664.3	30,923.5	36,795.0	39,605.5	34,340.0	34,159.0	37,473.5	47,225.5
Total	-17,472.0	-27,409.7	-37,024.2	-44,363.0	-38,279.8	-53,485.2	-55,554.4	-55,952.5	-80,342.4	-90,657.7	-92,862.0

Note: The trade balance is the net of *total exports* minus *total imports*. *Total exports* include re-exports, whereas *domestic exports* are shipments of goods produced within the United States only.

Source: United States Department of Commerce

6. Appendix A: Defining the High Technology Sector

6.1. How was the sector definition derived?

In 1995, BC Stats and the Science and Technology Division of the Ministry of Employment and Investment developed a definition of the high technology sector that focused on standard industries that produce high technology goods and services as their ultimate outputs. The definition looked at the high tech outputs of various standard industries (industries defined in the Canadian Standard Industrial Classification—SIC), their level of research activity, their representation in existing lists of high tech companies and the opinions of an expert panel drawn from government, university and the private sector.²⁰ The SIC data series has since been discontinued and a new classification system, the North American Industry Classification System (NAICS), has been implemented.

The adoption of NAICS-based industry definitions made it necessary to revisit the definition on which the high tech estimates were based, since many of the industry groupings previously used were no longer available. During 2001, in consultation with industry stakeholders, BC Stats developed a new definition of the high technology sector that was based on the NAICS industry categories. The process of developing the criteria for including or excluding specific industries in the definition was similar to that of the original SIC-based definition as commodity lists, research activities and company lists were once again examined. In addition, since an accepted SIC-based definition was already available, an SIC to NAICS concordance was used as a starting point.²¹

The definition originally chosen (based on theoretical considerations) proved to be only a starting point, as much of the information required to compile high technology statistics was not available at the required level of detail. A working definition, based on availability of data, was adopted in order to prepare the estimates presented in the *Profile* report.

²⁰ The complete methodology is presented in Lawrance, J. and Miller, S. *Defining the British Columbia High Technology/Knowledge Sector*. (1996). BC Stats, Ministry of Government Services, and Ministry of Employment and Investment, Government of British Columbia.

²¹ A more detailed discussion of the methodology is presented in Miller, S. and Adams, S. *Defining the British Columbia High Technology Sector Using NAICS*. (2001). BC Stats, Ministry of Management Services, Government of British Columbia.

In 2005, that definition was expanded further to include various communications technologies. The new industries added to the existing definition were determined through a review of literature pertaining to high technology definitions in use elsewhere, particularly those from the American Electronics Association (whose definition has been widely used by institutions around the world) and Industry Canada.²² The definition has been further tweaked to incorporate NAICS changes. Every five years NAICS is revised to reflect the emergence of new or expanded industries and often this includes industries in the realm of high technology.

6.2. Are all high tech companies included?

It is recognized that there are some drawbacks to the industry-based definition employed here. The first is that NAICS does not fully recognize industries of the "new economy." As a result, new products and services are often grouped in an industry that primarily produces similar but distinctly different products and services.

Second, it is difficult to capture the full breadth of high technology or knowledge-intensive activity in the economy through NAICS-based definitions. Innovation is not unique to a specific group of industries, but can be found throughout the whole economy. Some firms on the "leading edge" will be missed if they are classified in industries that, in aggregate, fail to show high tech characteristics. On the other hand, it is impossible to remove those firms that lag behind the norm in an industry.

The industries included in the definition adopted for this profile represent the core of the high technology sector. While it is certainly true that examples of creativity and innovation can be found in every industry, this definition, with its industry focus, includes only those industries where high technology activity is concentrated.

²² Platzer, M., Novak, C.A. and Kazmierczak, M.F. (February 2003). *Defining the High-Tech Industry*. American Electronics Association.

E. Wayne Clendenning & Associates (May 2000). *Comparison and Reconciliation of SIC and NAICS Industry Codes Used to Define Knowledge-Based Industries (KBIs)*. Industry Canada.

6.3. Exactly which industries are included?

The following table lists the industries that are defined, for the purpose of this report, to constitute the high technology sector.

INDUSTRIES IN THE HIGH TECHNOLOGY SECTOR

NAICS	Industry Description
Manufacturing Industries	
325189	Other Inorganic Chemicals
325410	Pharmaceutical and Medicine
333310	Commercial and Service Industry
334110	Computer and Peripheral
334210	Telephone Apparatus
334220	Radio, Television Broadcasting & Wireless Communications Equipment
334290	Other Communications Equipment
334310	Audio and Video Equipment
334410	Semiconductor and Other Electronic Components
334511	Navigational and Guidance Instruments
334512	Measuring, Medical and Controlling Devices
334610	Manufacturing and Reproducing Magnetic and Optical Media
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus
335920	Communication and Energy Wire and Cable
335990	All Other Electrical Equipment and Component
336410	Aerospace Products and Parts
339110	Medical Equipment and Supplies
Service Industries	
511211	Software Publishers (Except Video Game Publishers)
511212	Video Game Publishers
512110	Motion Picture and Video Production
512190	Post-Production and Other Motion Picture and Video Industries
515210	Pay and Specialty Television
517111	Wired Telecommunications Carriers (Except Cable)
517112	Cable and Other Program Distribution
517210	Wireless Telecommunications Carriers (Except Satellite)
517410	Satellite Telecommunications
517910	Other Telecommunications
518210	Data Processing, Hosting and Related Services
519130	Internet Publishing and Broadcasting, and Web Search Portals
541330	Engineering
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (Except Geophysical) Services
541380	Testing Laboratories
541514	Computer Systems Design and Related (Except Video Game Design and Development)
541515	Video Game Design and Development Services
541620	Environmental Consulting
541690	Other Scientific and Technical Consulting
541710	Research and Development in Physical, Engineering and Life Sciences
541720	Research and Development in the Social Sciences and Humanities

Note: For the purposes of this report, the manufacturing NAICS industries are grouped together as "Manufacturing." For services, Engineering (541330) is reported as a separate industry. The other industries are aggregated into groups to maintain confidentiality requirements and still allow for some detailed reporting. Computer and Related Services includes 511211, 511212, 518210, 519130, 541514 and 541515. The remaining 541 NAICS codes are grouped into a category called "Other Services." The 517 NAICS codes and 515210 are covered under a single "Telecommunications and Related" classification and 512110 and 512190 are grouped under "Motion Picture Production and Post-Production."

6.4. High Technology Industries

6.4.1. Manufacturing

325189 Other Inorganic Chemicals

Comprises establishments engaged in the manufacture of high tech inorganic chemicals such as enriched uranium and radioactive isotopes.

325410 Pharmaceuticals and Medicine

Consists of firms engaged in the manufacture of drugs, medicines and related products for human or animal use, including cutting edge products developed through considerable research efforts.

333310 Commercial and Service Industry Machinery

Contains establishments that manufacture machinery for use in commercial and service industries, including high tech optical instruments and photographic equipment.

334110 Computers and Peripheral Equipment

Comprises establishments primarily engaged in the manufacture of computers and peripheral computer equipment such as storage devices, CD-ROM and DVD drives, optical readers and scanners, etc.

334210 Telephone Apparatus

Contains firms that manufacture wired telephone and data communications equipment, including cordless telephones, facsimile equipment, local area network (LAN) equipment, etc.

334220 Radio and Television Broadcasting and Wireless Communications Equipment

Consists of firms primarily engaged in manufacturing radio and television broadcast and wireless communications equipment, including satellites, GPS (global positioning system) and pagers.

334290 Other Communications Equipment

Comprises establishments engaged in the manufacture of other types of communications equipment, such as traffic signals, fire detection and alarm systems, remote control units, intercom systems, etc.

334310 Audio and Visual Equipment

Establishments engaged in manufacturing electronic audio and video equipment such as compact disc and DVD players, televisions, etc.

334410 Semiconductor and Other Electronic Components

Consists of firms engaged in the manufacture of semiconductor devices and other electronic components such as circuit boards, microprocessor chips and other computer parts, fibre-optic connectors, etc.

334511 Navigational and Guidance Instruments

Comprises establishments primarily engaged in navigational and guidance instruments such as air traffic control radar systems, sonar, etc.

334512 Measuring, Medical and Controlling Devices

Establishments engaged mainly in the manufacture of equipment such as high tech medical devices, laboratory analytical and testing instruments, industrial process control instruments, etc.

334610 Manufacturing and Reproducing Magnetic and Optical Media

Contains establishments primarily engaged in manufacturing magnetic and optical media such as compact discs, computer software, etc.

335315 Switchgear and Switchboard, and Relay and Industrial Control Apparatus

Comprises establishments engaged in manufacturing electrical switchgear and protective equipment, including high tech switching devices.

335920 Communication and Energy Wire and Cable

Consists of firms engaged in the manufacture of communications and energy wire and cable such as high tech fibre-optic cable.

335990 All Other Electrical Equipment and Components

Comprises establishments engaged in manufacturing electrical equipment and components, including fuel cells.

336410 Aerospace Products and Parts

Establishments engaged in manufacturing aircraft, missiles, space vehicles, etc.

339110 Medical Equipment and Supplies

Contains firms that manufacture medical equipment and supplies, including high tech laboratory and dental equipment.

6.4.2. Services

511211 Software Publishers (Except Video Game Publishers)

Establishments engaged in producing and distributing computer software, not including video games.

511212 Video Game Publishers

Establishments engaged in producing and distributing video games.

512110 Motion Picture and Video Production

Comprises firms engaged in producing motion pictures, videos, television programs and commercials.

512190 Post-Production and Other Motion Picture and Video Industries

Consists of establishments engaged in providing post-production services and services to the motion picture and video industries, including high tech special effects and animation.

515210 Pay and Specialty Television

Establishments engaged in broadcasting television programs on specialty cable networks, pay television or satellite networks.

517111 Wired Telecommunications Carriers (Except Cable)

Consists of establishments engaged in operating and maintaining network facilities for the transmission of voice, data, text, sound and video.

517112 Cable and Other Program Distribution

Establishments engaged in distributing television and radio programs via cable or satellite distribution systems.

517210 Wireless Telecommunications Carriers (Except Satellite)

Comprises establishments engaged in operating and maintaining switching and transmission facilities to provide direct communications via the airwaves.

517410 Satellite Telecommunications

Contains firms engaged in operating and maintaining satellite telecommunications facilities.

517910 Other Telecommunications

Comprises establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking and telemetry, and radar station operation.

518210 Data Processing, Hosting and Related

Consists of firms engaged in providing hosting or data processing services.

519130 Internet Publishing and Broadcasting and Web Search Portals

Comprises firms primarily engaged in publishing and/or broadcasting content on the Internet, or in operating web search portals.

541330 Engineering

Comprises establishments engaged in engineering activities in design, development and utilization of machines, instruments, systems, etc.

541360 Geophysical Surveying and Mapping Services

Establishments engaged in gathering, interpreting and mapping geophysical data.

541370 Surveying and Mapping (Except Geophysical) Services

Contains firms engaged in providing surveying and mapping services of the surface of the earth, including the sea floor.

541380 Testing Laboratories

Consists of establishments engaged in providing physical, chemical and other analytical testing services.

541514 Computer Systems Design and Related (Except Video Game Design and Development)

Establishments that provide expertise in the field of information technologies through writing and supporting computer software, and computer systems design and maintenance, with the exception of video games.

541515 Video Game Design and Development

Establishments primarily engaged in designing and developing video games without publishing them.

541620 Environmental Consulting

Comprises establishments primarily engaged in providing consulting services on environmental issues, using a staff of scientists, engineers and other technicians.

541690 Other Scientific and Technical Consulting

Consists of firms engaged in providing advice and assistance on scientific and technical issues (other than environmental issues).

541710 and 541720 Scientific Research and Development

Establishments engaged in research and experimental development in areas such as biotechnology, computers, physics, mathematics, etc.

Note that these NAICS codes are based on the 2012 NAICS definition, which includes some changes from the 2007 NAICS, including to some industries in the high technology sector. Specifically, the 2007 NAICS industry 511210 has been split into 511211 and 511212 to break out video game publishers and, similarly, 541510 has been split into 541514 and 541515 to break out video game designers and developers. Some of the data in this report were compiled using information that is still based on the 2007 NAICS; however, given that these new industry classifications sum to the old ones, this will not result in a data break.

7. Appendix B: Defining High Technology Commodities

7.1. Defining high technology commodities

Developing a definitive list of what commodities should be considered high technology is a difficult exercise. Leading technologies are continually evolving and what is considered high technology today may be classified as low tech tomorrow. As a result, the definition of high technology commodities must necessarily change over time. This means that data regarding high technology trade from 2002 may contain commodities that are no longer included in the 2012 definition. However, this does not mean that the data cannot be compared over time. It is still valid to look at growth rates over that period as long as it is clear that the rates represent growth in the changing definition of high technology, rather than a static basket of goods.²³

The commodity list used by BC Stats to define high technology goods is based on the U.S. Bureau of the Census' advanced technology products (ATP) list.²⁴ To be considered advanced technology, a commodity code has to meet certain criteria. It must contain products whose technology is from a recognized high technology field, the products must represent the leading edge of that field and they must comprise a significant portion of all goods in the classification code.

The list of American commodity codes from the ATP list was matched against the equivalent Canadian codes. In many cases the codes matched exactly and no further effort needed to be expended. However, in other cases there was not an exact match, particularly for exports, which are coded to only eight digits. For these commodity groups, further analysis was undertaken using available data from the U.S. Bureau of the Census and Statistics Canada to determine whether or not the majority of these codes were high technology (as defined by the ATP list). If it was judged that this was not the

²³ One technical limitation that may cause difficulty in temporal comparisons is when there are changes to the definition of Harmonized System codes. When this occurs, there may be a resulting unintended change to the high technology commodity definition. This is due to the fact that the code may now include or exclude commodities that it did not previously, such that these goods can no longer be separated out (or perhaps can be more finely defined, so that low technology commodities that previously had to be included can now be expunged from the definition). However, these changes are usually small and should not have a significant impact on the data.

²⁴ For a discussion of the development and content of this list, see: McGuckin, R. H., Abbott, T. A., Herrick, P. and Norfolk, L. (1991). *Measuring Advanced-Technology Products Trade: A New Approach*. U.S. Bureau of the Census.

case, the commodity was excluded from the high tech definition. While this may result in some high technology products being excluded from the definition, it should be balanced to some extent by those commodity classifications that, although they are mainly high technology, still include some low tech goods. Since the ATP list itself is defined using classification codes, this kind of trade-off is already present in the definition. No exact measure of high technology trade is possible to achieve since high technology is subjective to begin with, but this definition should be in line with what most people would agree is high technology.

Note that a commodity need not be produced by one of the industries included in the industry-based high technology definition in order to be considered a high technology product. Some industries not included in the high tech definition, because they mainly manufacture low technology goods, may also manufacture some high technology products. Conversely, it is possible for those industries classified as high technology to also manufacture some products that are considered low tech.

7.2. Calculating B.C. consumed imports

At this time, Statistics Canada does not produce data on imports by province of consumption, rather, only by province of clearance. An estimate of B.C. consumed imports was derived using the consumption of Canadian imports of those commodities by the B.C. economy and applying this ratio to total Canadian imports.

7.3. Data source

Data for trade in goods are supplied by Statistics Canada and the United States Bureau of the Census.

7.4. Commodity groups

The U.S. Bureau of the Census has defined ten fields involving advanced or high technology commodities. Each field represents a large number of products and processes that are considered to be on the leading edge. These fields have been used to classify exports and imports in this report.

Aerospace

Technological developments in this field include advances that allow planes to fly further, faster, higher, to use less fuel and to have quieter engines. Many of the advances have been adapted to military applications, such as vertical take-off aircraft and aircraft that require shorter distances for takeoff and landings.

Biotechnology

Biotechnology covers recent developments in recombinant deoxyribonucleic acid (DNA) research and genetic engineering. Obvious examples include drugs, enzymes and other therapeutic items. Common applications include agricultural production and the use of microorganisms for the production of drugs and other complex molecules.

Computer and Telecommunications

This field covers technological advances affecting both computers and telecommunications hardware products. The primary advances in this field are in developing hardware that can process information more quickly. Important breakthroughs are expected in the areas of artificial intelligence and parallel processing.

Computer Integrated Manufacturing

This field includes developments in robotics and numerically controlled (NC) machines. These products have a significant impact on industrial automation. Robots and NC machines perform increasingly sophisticated operations through developments in sensory and visual capabilities of machines. With these breakthroughs, the manufacturing processes have increased in flexibility and require less human intervention to operate and maintain production machinery. Many of the new automation technologies are made possible because of breakthroughs in the application and development of faster, smaller components.

Electronics

The miniaturization of electronic components is the most important recent technological advance in the field of electronics. Some technologies included are integrated circuits; semiconductors, such as transistors and diodes; and new developments in surface mounting of electronic components, such as capacitors and resistors.

Life Sciences (Medical)

This field encompasses the application of scientific advances to medical sciences. Nuclear resonance imaging, echo cardiographs and total-patient monitoring systems are examples of products developed from recent technological advances in this field. Also, recent increases in the strength of materials and reductions in their weight have led to improved internally-implemented fixation devices and prostheses.

Materials Design

Materials design includes the newest methods of production for products that already exist in the market as well as the development of new products. Recent examples of technological advancements include high temperature superconductors, advanced polymers that expand the areas of plastic use and new ultra-clear glass that allows fibre-optic cable to be used for long distance communication.

Nuclear Technology

This field covers developments in nuclear power production and primary nuclear reactors. It includes newly designed reactor components that improve the safety and efficiency of nuclear power plants. It also includes developments in the creation and packaging of nuclear fuel, and the application of atomic physics to other areas of science.

Opto-Electronics

Opto-electronics is generally defined as the expanded development and application of the laser. Also included are recent advances in photoelectric cells and diodes, photographic and other imaging equipment, and fibre-optic cables.

Weapons

This field covers all advanced methods used for the development, guidance, and control of weapons intended for national or personal protection and deterrence. Many of the developments in this area are the result of breakthroughs in computers and telecommunications as well as aerospace technologies.



BCStats

BC Stats is the provincial government's central statistics agency and has the government's largest concentration of statistical products, services and expertise. As a branch of the Ministry of Technology, Innovation and Citizens' Services, the organization is in the business of providing government with statistical information and analytical services to support informed decision-making and policy development.

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